



CW-4000HD & CW-3000HD

**High Definition
Linux Media Center**

User Manual

Version 0.9

Safety Precautions

Electrical Safety

- To prevent electrical shock hazard, disconnect the power cable from the electrical outlet before relocating the system
- When adding or removing signal cables or devices from the system ensure that the power cable is unplugged before doing so.
- Seek professional assistance before using an adapter or extension cord. These devices could interrupt the grounding circuit.
- Do not attempt to repair or modify the power supply. Doing so could create the risk of electrical shock or fire.

Operational Safety

- Before operating the system, carefully read the manual that came with the system.
- Before using the system ensure that all cables are correctly connected and there is no damage to the power or signal cables. If any damage is detected, contact the dealer immediately.
- To avoid short circuits, keep paper clips, screws, staples and, other metallic devices away from connectors and ventilation openings.
- Avoid dust, humidity and, temperature extremes. Do not operate the system in any area that may become wet.
- Place the system on a stable surface
- Do not block ventilation holes in the system. The system requires ventilation to ensure proper operation.
- If technical problems are encountered with the system, contact a qualified service technician or the retailer where the product was purchased.

Table of Contents

System Specifications.....	<u>6</u>
Dimensions.....	<u>6</u>
Hardware.....	<u>6</u>
Software.....	<u>7</u>
Configurability.....	<u>8</u>
Package Contents.....	<u>10</u>
System Placement.....	<u>10</u>
Remote Control Unit.....	<u>11</u>
Cable Connections.....	<u>11</u>
Rev. 1.....	<u>11</u>
Rev. 2.....	<u>12</u>
DVB & ATSC.....	<u>13</u>
Rev 1.....	<u>13</u>
Rev 2.....	<u>14</u>
DUAL DVB.....	<u>15</u>
Rev 1.....	<u>15</u>
Rev 2.....	<u>16</u>
DVB & ATSC.....	<u>17</u>
Single DVB.....	<u>18</u>

Quick Start Guide.....	<u>19</u>
System Bootup.....	<u>21</u>
System Setup.....	<u>22</u>
Main Menu.....	<u>23</u>
Admin Profile.....	<u>24</u>
Shutdown Menu.....	<u>24</u>
Updates Menu.....	<u>25</u>
Date.....	<u>26</u>
Download.....	<u>27</u>
Adding And Editing An Updates Server.....	<u>29</u>
Install.....	<u>30</u>
System.....	<u>34</u>
Backup.....	<u>35</u>
Restore.....	<u>35</u>
Configuration Menu.....	<u>36</u>
Adapter Setup.....	<u>37</u>
Display Setup.....	<u>38</u>
Size Setup.....	<u>39</u>
Timeout Setup.....	<u>40</u>
Themes Setup.....	<u>41</u>
Network Setup.....	<u>42</u>
Audio Setup.....	<u>44</u>
Storage Setup.....	<u>45</u>
Shared Folders.....	<u>48</u>
Adding And Editing Shared Folders.....	<u>49</u>
Satellite TV Setup.....	<u>50</u>
Weather Setup.....	<u>51</u>
Antenna Menu.....	<u>52</u>
Satellite Setup.....	<u>53</u>
Adding A Satellite.....	<u>55</u>
Satellite Scanning.....	<u>56</u>
Editing Channels.....	<u>57</u>
Motor Support.....	<u>58</u>
ATSC Scanning.....	<u>62</u>
Edit ATSC.....	<u>63</u>
Cable Scanning.....	<u>64</u>
Edit QAM.....	<u>65</u>
Profiles Menu.....	<u>66</u>
Adding And Editing A Profile.....	<u>67</u>
Assigning Antenna Channels.....	<u>68</u>
Assigning Applications.....	<u>69</u>

System Operation.....	<u>70</u>
Profiles.....	<u>70</u>
Profile Applications.....	<u>71</u>
TV & Radio.....	<u>72</u>
Satellite TV.....	<u>72</u>
Navigating Through The On Screen Menus.....	<u>73</u>
The Grid Program Guide.....	<u>75</u>
The "Schedule" Menu.....	<u>77</u>
Selecting A Channel.....	<u>78</u>
Favorites.....	<u>78</u>
Selecting Audio Tracks.....	<u>79</u>
Instant Recording.....	<u>79</u>
Pausing Live Video.....	<u>80</u>
Replaying A Recording.....	<u>80</u>
Replay Control.....	<u>81</u>
Editing Recordings.....	<u>82</u>
Quick Editing Mini-Howto.....	<u>83</u>
Programming The Timer.....	<u>84</u>
VDR Live (SatelliteTV Via A PC's Web Browser).....	<u>87</u>
WebTV.....	<u>88</u>
TVUnetworks.....	<u>89</u>
Sopcast.....	<u>90</u>
IP TV.....	<u>91</u>
Categories.....	<u>91</u>
Countries.....	<u>92</u>
Manually Adding A Favorite.....	<u>93</u>
IP Radio.....	<u>94</u>
Web.....	<u>95</u>
Browser.....	<u>95</u>
Bit Torrent.....	<u>96</u>
News.....	<u>98</u>
Weather.....	<u>99</u>
Media.....	<u>100</u>
Video.....	<u>100</u>
DVD.....	<u>102</u>
VCD.....	<u>103</u>
CD.....	<u>103</u>
Music.....	<u>105</u>
Pictures.....	<u>107</u>

Roaster.....	<u>109</u>
Prepare DVD.....	<u>110</u>
Prepare Video.....	<u>112</u>
Merge DVD.....	<u>113</u>
Merge Video.....	<u>114</u>
Burn DVD.....	<u>115</u>
Burn Video.....	<u>116</u>
Burn Data.....	<u>117</u>
Extras.....	<u>118</u>
File Manager.....	<u>118</u>
CD Ripper.....	<u>119</u>
Games.....	<u>120</u>
Appendix.....	<u>121</u>
External USB Device Connection.....	<u>121</u>
Keyboard / Mouse Connection.....	<u>122</u>
Networking With Windows PC's.....	<u>123</u>
Seeing Files Over The Network.....	<u>123</u>
Enabling More Shared Folders.....	<u>123</u>
Playing Your Recordings Over The Network.....	<u>123</u>
Remote Control - Keyboard Cross-reference.....	<u>124</u>
Troubleshooting.....	<u>125</u>
Accessing Logs.....	<u>125</u>
BIOS Settings.....	<u>125</u>
Display Diagnostics.....	<u>126</u>
Remote Control Diagnostics.....	<u>127</u>
Roaster Diagnostics.....	<u>128</u>
Satellite TV Diagnostics.....	<u>128</u>
Shared Folders Diagnostics.....	<u>130</u>
Software License.....	<u>132</u>
Warranty Information.....	<u>133</u>
Technical Support.....	<u>133</u>

System Specifications

Dimensions

- The CW-3000HD is 14" wide by 5.5" tall by 15" deep Physical Installation
- The CW-4000HD is 14.5" wide by 4" tall by 14" deep Physical Installation

Hardware

- Processor:
 - Sempron 3000+ 64Bit CPU AM2 Socket (CW-3000HD rev. 1)
 - Athlon X2 4000+ 64Bit CPU AM2 Socket (CW-3000HD rev. 2)
 - Athlon X2 5000+ 64Bit CPU AM2 Socket (CW-4000HD)
- Memory: 512MB DDR2 RAM Expandable to 8GB
- Flash Drive: 1 GB System Flash
- Hard Drive: Not Included
- Video:
 - Nvidia GeForce 6150 (CW-3000HD rev. 1)
 - Nvidia GeForce 7050 (CW-3000HD rev. 2)
 - Nvidia GeForce 7050 (CW-4000HD)
- Satellite Tuner:
 - Input terminal: F-type 75 Ohm
 - Receiving frequency: 950~2150 MHz tuning range
 - Input level: -65~25dBm
 - Support MCPC and SCPC
 - Symbol rate: 2~45 Msps (CW-3000HD DVB tuner)
 - Symbol rate: 256Ksps~30 Msps (CW-4000HD Skywalker-CW3K DVB tuner)
 - FEC Codes: 1/2,2/3,3/4,5/6,7/8 and Auto
 - QPSK (CW-3000HD)
 - QPSK, 8PSK, 16QAM (CW-4000HD Skywalker-CW3K DVB tuner)
- ATSC Tuner (optional)
 - Latest LG 5th generation tuner for enhanced reception
 - Supports QAM 64 and QAM 256 Cable signals
 - One TV antenna 75 ohm reception port
- Video Output: VGA/HDMI or DVI/Component/S-Video
- Audio Output: Analog and SPDIF Dolby Digital Audio output
- USB Ports: 4 USB v2.0 ports on back panel and 2 USB v2.0 ports on front pane
- Media Reader (CW-3000HD)
 - All In One Media Reader. Supports most Compact Flash cards
- Ethernet Port: RJ-45 10/100/1000 Mbits compatible
- DVDRW: Read/Write DVDs and CDs

Software

- Java 1.4.2 Graphical User Interface
- Open Source Linux Operating System
 - Version 2.6 Kernel
 - X Windows Environment
 - VDR (Video Disk Recorder)
 - atscepg
 - epgsearch
 - extrecmenu
 - femon
 - live
 - nacc
 - nvsettings
 - pin
 - radioinfo
 - radiolist
 - satlist
 - setup
 - skinsoppalusikka
 - streamdev-server
 - xine
 - yaepg
 - zaphistory
 - zoom
 - GQview image viewer
 - Roaster mpg, iso, and disc builder
 - Firefox web browser (Bon Echo)
 - Lighttpd web server
 - EPDFview pdf viewer
 - Samba file server (Windows style networking)
 - Xine multimedia player

Configurability

- **Updates**

Stay up to date with the convenience of the internal update system.

- Add/Edit custom Download Servers
 - Enable/Disable automatic update alert
 - Enable/Disable automatic update download

- **Antenna**

Set up and scan your styles of Antenna configurations.

- **Satellite**

- Switches
 - None
 - DISEQ C
 - Mini DISEQ C
 - 22 KHz Tone
 - Uncommitted
 - LNB's
 - None
 - Universal
 - Universal2
 - Circular
 - Linear
 - DP Circular
 - DP Linear
 - WB Circular
 - C Band
 - Motor
- **ATSC** (Optional ATSC card required to utilize this feature)
 - **Cable** (Optional ATSC card required to utilize this feature)

- **Network**

Integrate your High Definition Linux Media Center into your home network.

- Enable/Disable Network
 - Edit Network Hostname
 - Edit Network Workgroup
 - Edit Network connection type
 - Obtain Address Automatically
 - Static Network Address
- Mount Shared Folders from your other home network PC's

- **Display**

Set your display device connection type.

- Primary Connection
 - DVI (CW-3000HD)
 - HDMI (CW-4000HD)
 - VGA
 - Component
 - S-Video
 - Composite (CW-3000HD)
- Display Resolution
 - 1080P
 - 1080i
 - 720P
 - 480P
 - Standard definiton
- Set menu theme style

- **Profiles**

Create and customize profiles to suit your needs.

- Password protect
- Enable sharing of a profile on your network (shared via samba and web server)
- Customize/auto-assign channel lists
- Customize/auto-assign applications

Package Contents

1. High Definition Linux Media Center Unit
2. Remote Control Unit
3. A/V Connection Cable
4. Power Cable
5. (2) AAA Batteries for Remote Control Unit
6. CD containing system restore image and user manual

System Placement

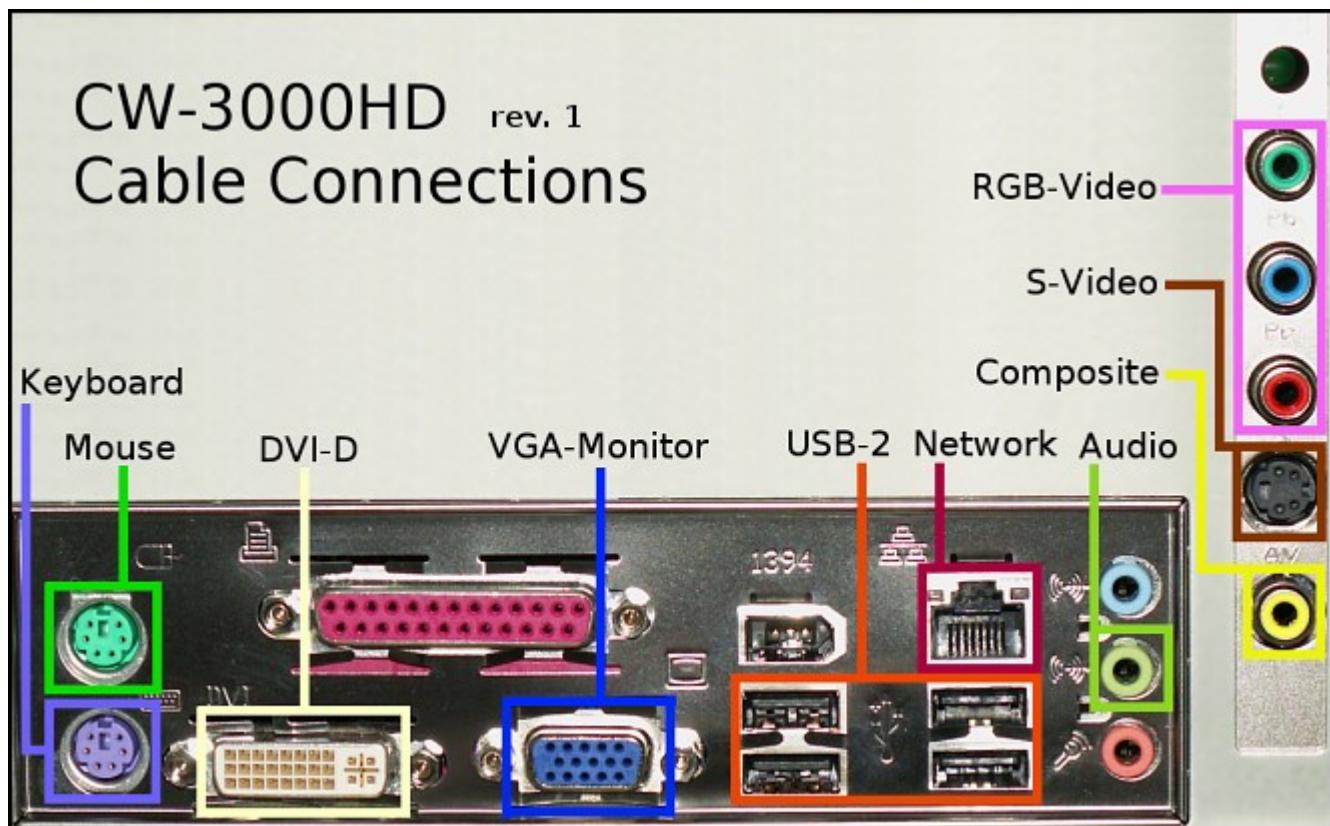
- Place the system on a stable surface. The unit can be damaged or cause damage if it were to fall to the floor.
- Place the system in a well ventilated area. The system will generate heat and needs to have free air movement to keep internal devices from overheating.
- Do not block the vents in the case. This is required to allow for free air movement.
- Do not place the system on a carpeted surface. System needs to be on a solid surface.
- System should be placed close to the display device. Optionally, an Internet connection and satellite feed should be in close proximity to the installation location to use IPTV and satellite functions of the system.
- If system requires extension cables or cable installation, consult a qualified installer to ensure signal integrity to the system.

Remote Control Unit

- The remote control unit is used to control all system functions.
- Do not allow the remote control unit to be used in a wet environment. Allowing the remote control unit to become wet can damage the unit.
- Remove the battery compartment cover on the back of the unit and insert the included batteries the remote control unit paying close attention to the battery orientation pictures inside the battery compartment.

Cable Connections

Rev. 1

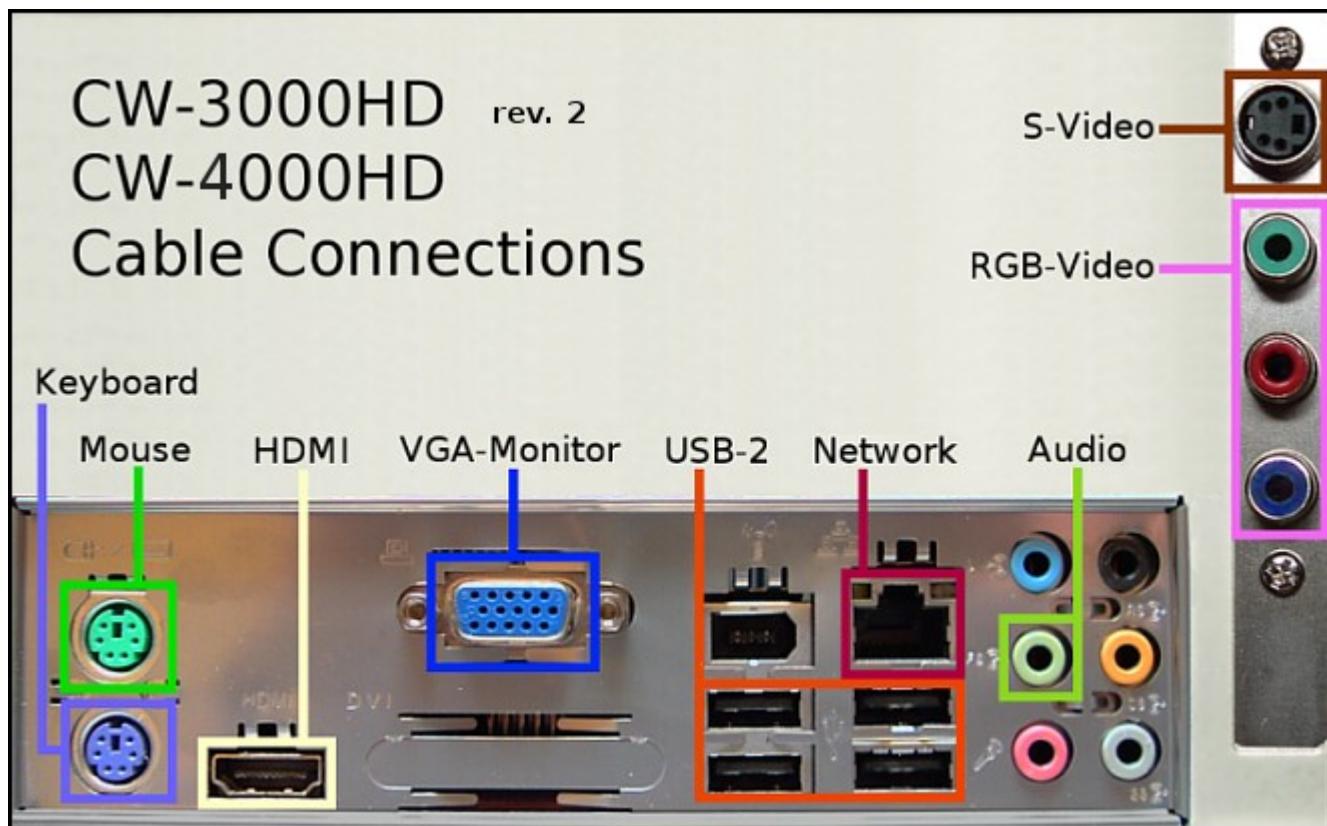


- 6 pin DIN Keyboard and Mouse connectors are for use with an optional keyboard/mouse.
- The 4 USB-2 connectors are for connecting external devices to the CW-3000HD. This allows external USB memory sticks, DVD/CDROM drives, or other USB devices to be used.
- RJ-45 Network connector for standard 10/100/1000 connection.
- The green 1/8" mini-jack connector is the stereo analog audio output jack.
- The RCA composite connector is for use with a SDTV.
- The 4 pin DIN S-Video connector is suitable for SDTV.
- The RGB-Video analog connectors for VGA output for use on a suitably equipped HDTV or computer style monitor.
- The 15pin D-Sub connector is a standard VGA output for use on a suitably equipped HDTV or computer style monitor.
- The 24 pin DVI-D connector is suitable for 1920x1080P, 1920x1080i, 1280x720P HDTV.

NOTE: It is recommended to use a quality DVI cable no longer than 9 feet.

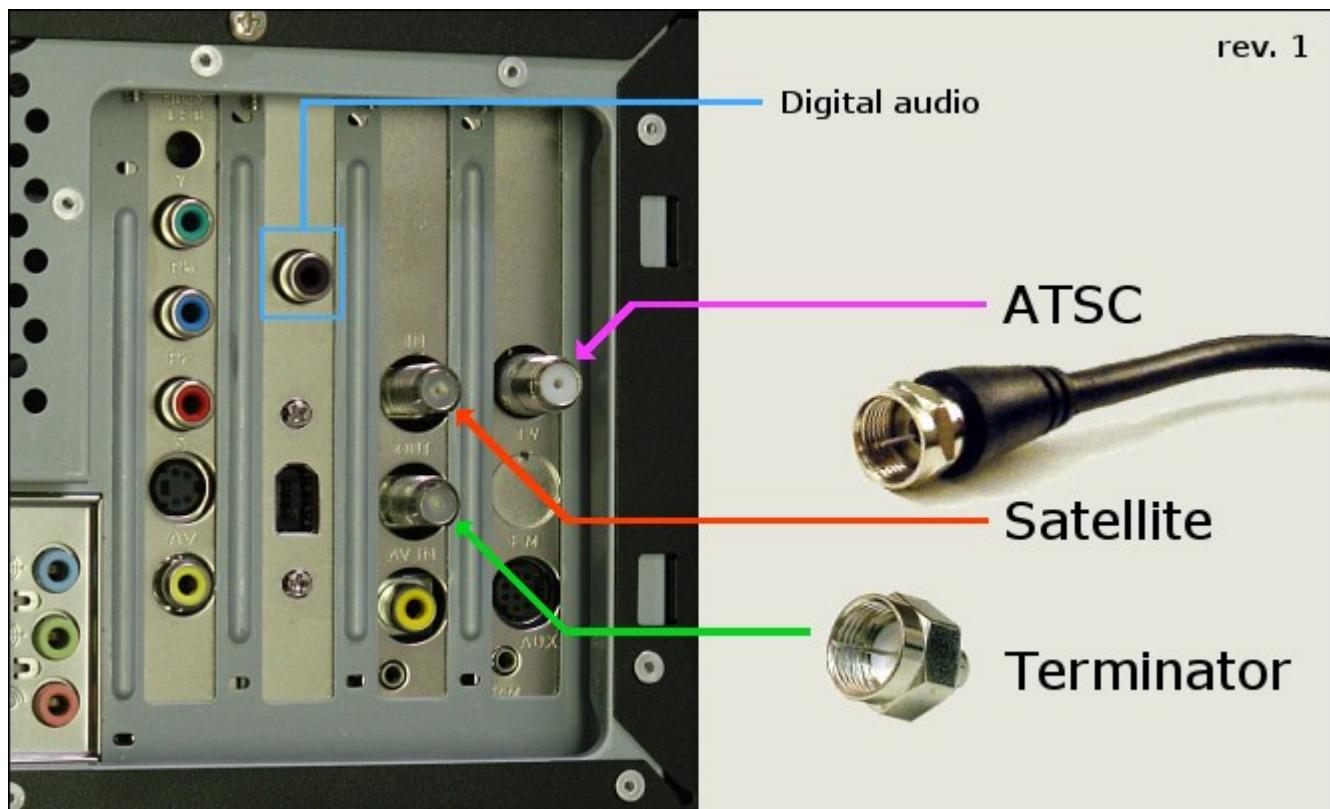
Cable Connections

Rev. 2

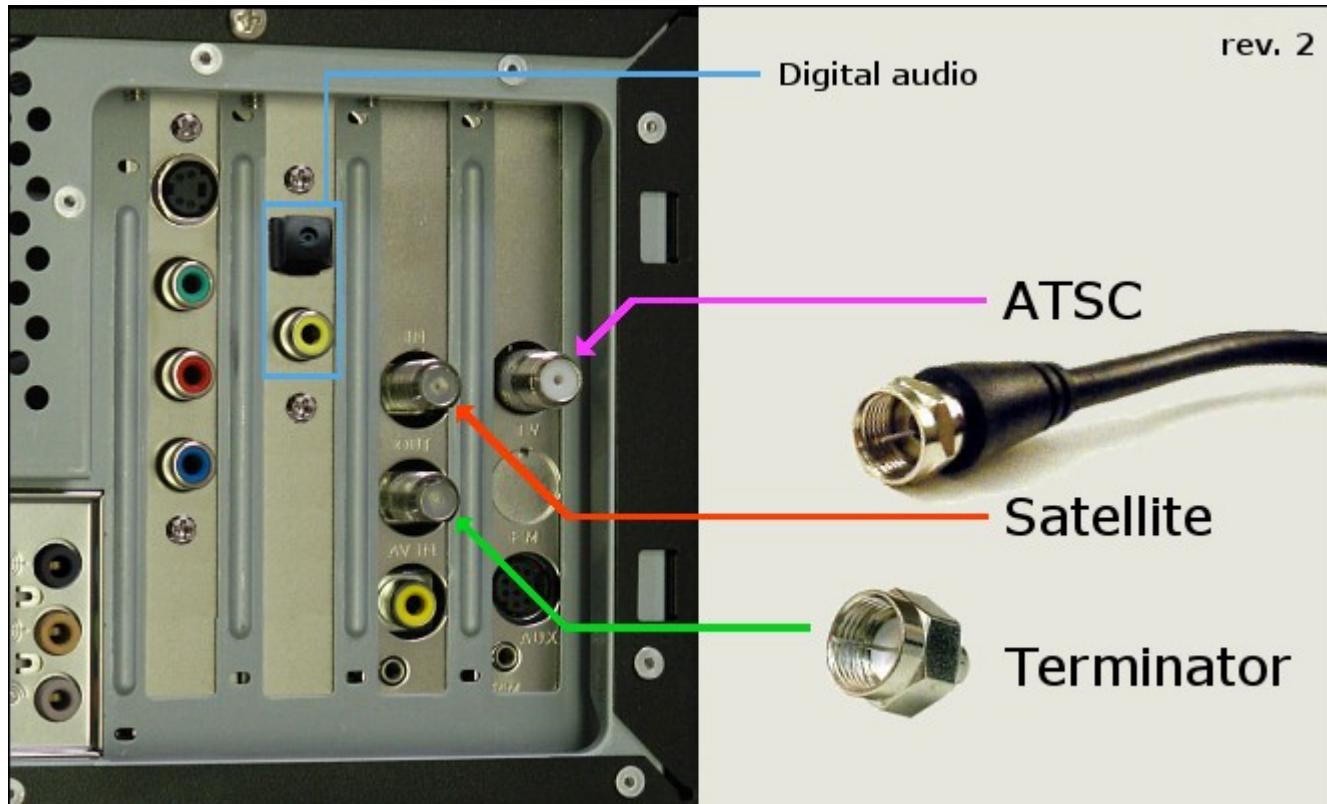


- 6 pin DIN Keyboard and Mouse connectors are for use with an optional keyboard/mouse.
- The 4 USB-2 connectors are for connecting external devices to the CW-3000HD. This allows external USB memory sticks, DVD/CDROM drives, or other USB devices to be used.
- RJ-45 Network connector for standard 10/100/1000 connection.
- The green 1/8" mini-jack connector is the stereo analog audio output jack.
- The RCA composite connector is for use with a SDTV.
- The 4 pin DIN S-Video connector is suitable for SDTV.
- The RGB-Video analog connectors for VGA output for use on a suitably equipped HDTV or computer style monitor.
- The 15pin D-Sub connector is a standard VGA output for use on a suitably equipped HDTV or computer style monitor.
- The 19pin Type-A HDMI connector is suitable for 1920x1080P, 1920x1080i, 1280x720P HDTV.

NOTE: It is recommended to use a quality HDMI cable no longer than 9 feet.



- Digital Audio RCA connector
- 75 ohm DVB & ATSC reception ports
- Connect the satellite cable to the upper connector of the vertical connector pair. The lower connector should have a 75 ohm F Terminator affixed.
(This is important to decrease interference and increase reception quality)
- Connect an antenna to the ATSC connector. It is the single connector.

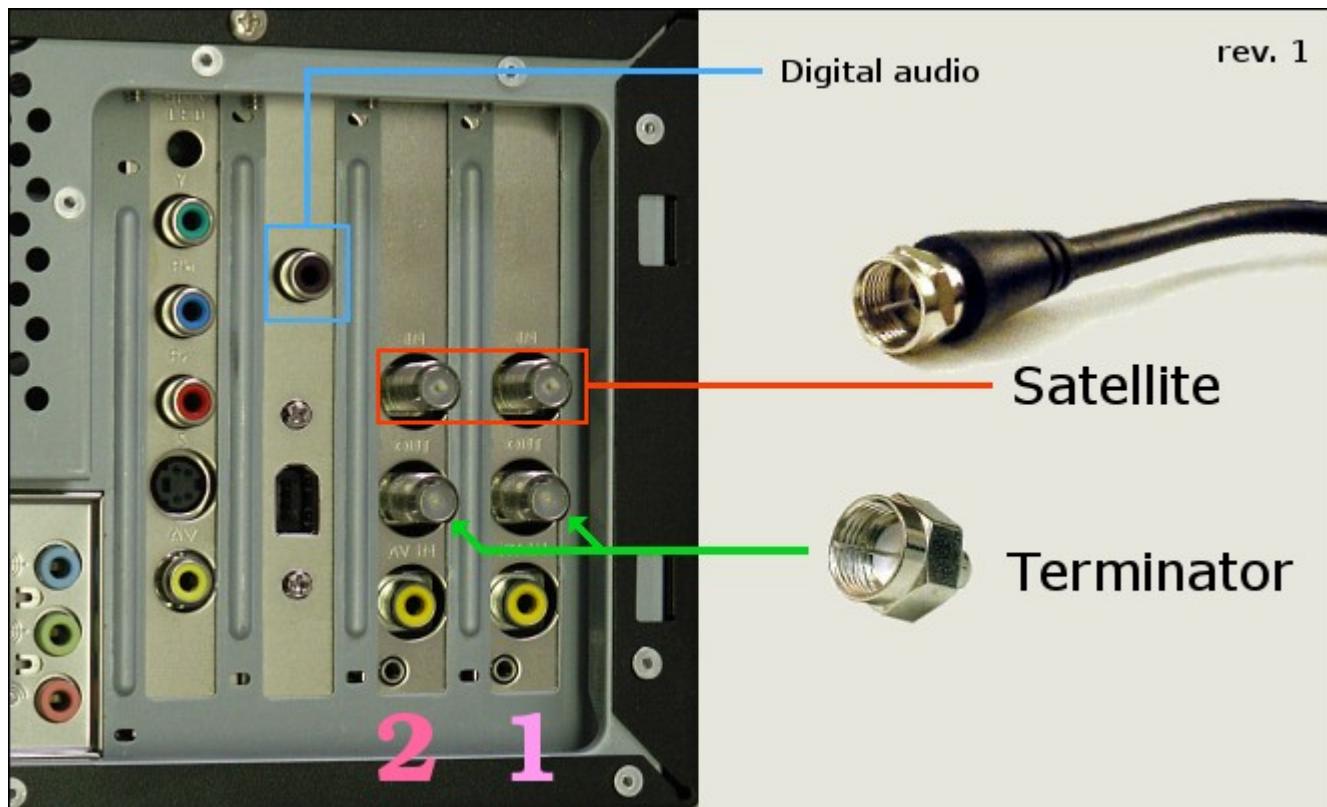
Rev 2

- Digital Audio Optical and RCA connectors
- 75 ohm DVB & ATSC reception ports
- Connect the satellite cable to the upper connector of the vertical connector pair. The lower connector should have a 75 ohm F Terminator affixed.
(This is important to decrease interference and increase reception quality)
- Connect an antenna to the ATSC connector. It is the single connector.

DUAL DVB

CW-3000HD

Rev 1



- Digital Audio RCA connector
- 75 ohm Dual DVB reception ports
- For dual satellite connections the upper connector in each vertical pair should be connected. The lower connectors should have 75 ohm F Terminators affixed. (This is important to decrease interference and increase reception quality)
- For a single satellite connection connect the upper connector on the vertical pair closest to the edge of the unit. In other words use DVB # 1

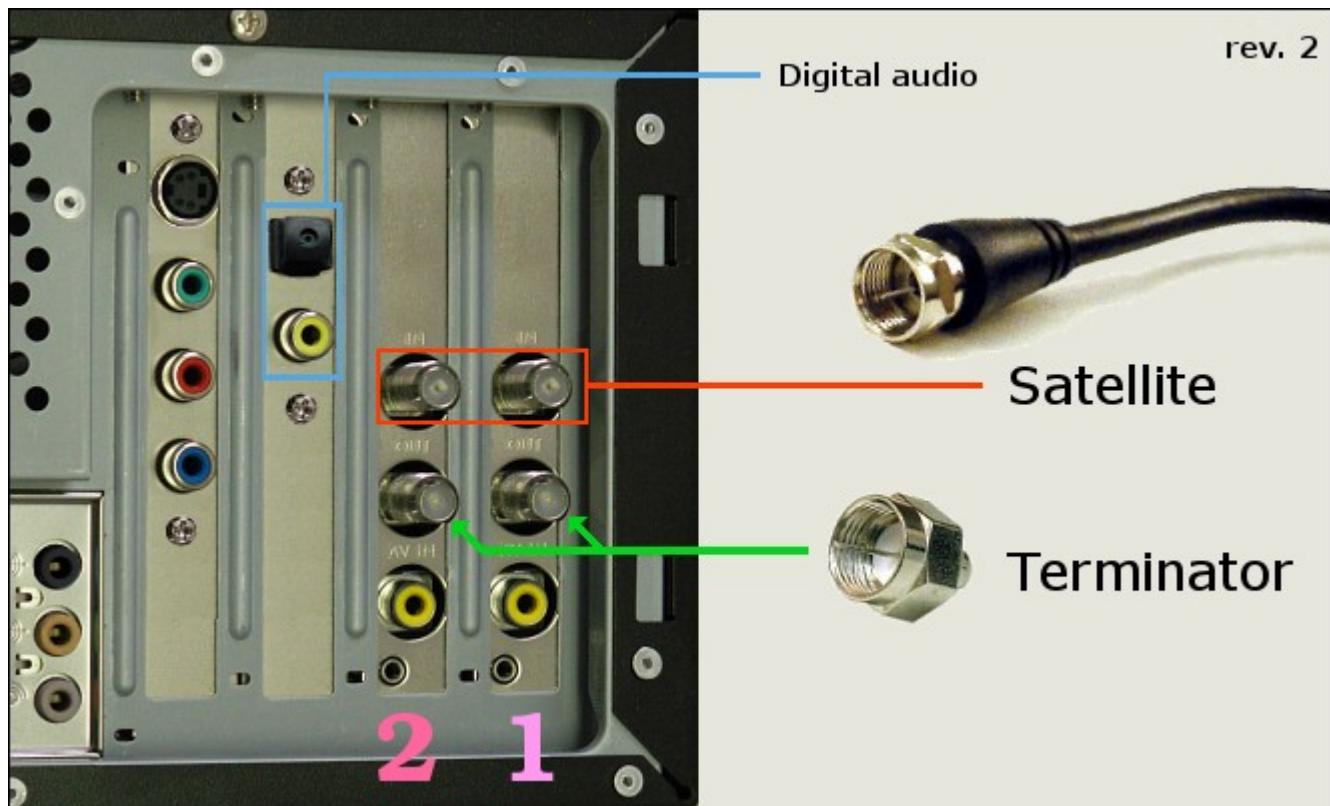
To fully utilize all the functions of the CW-3000HD you should have 2 satellite cables connected to the unit. Both cables need to contain identical feeds.

(ie. You need a dual output LNB with 2 separate lines)

DUAL DVB

CW-3000HD

Rev 2



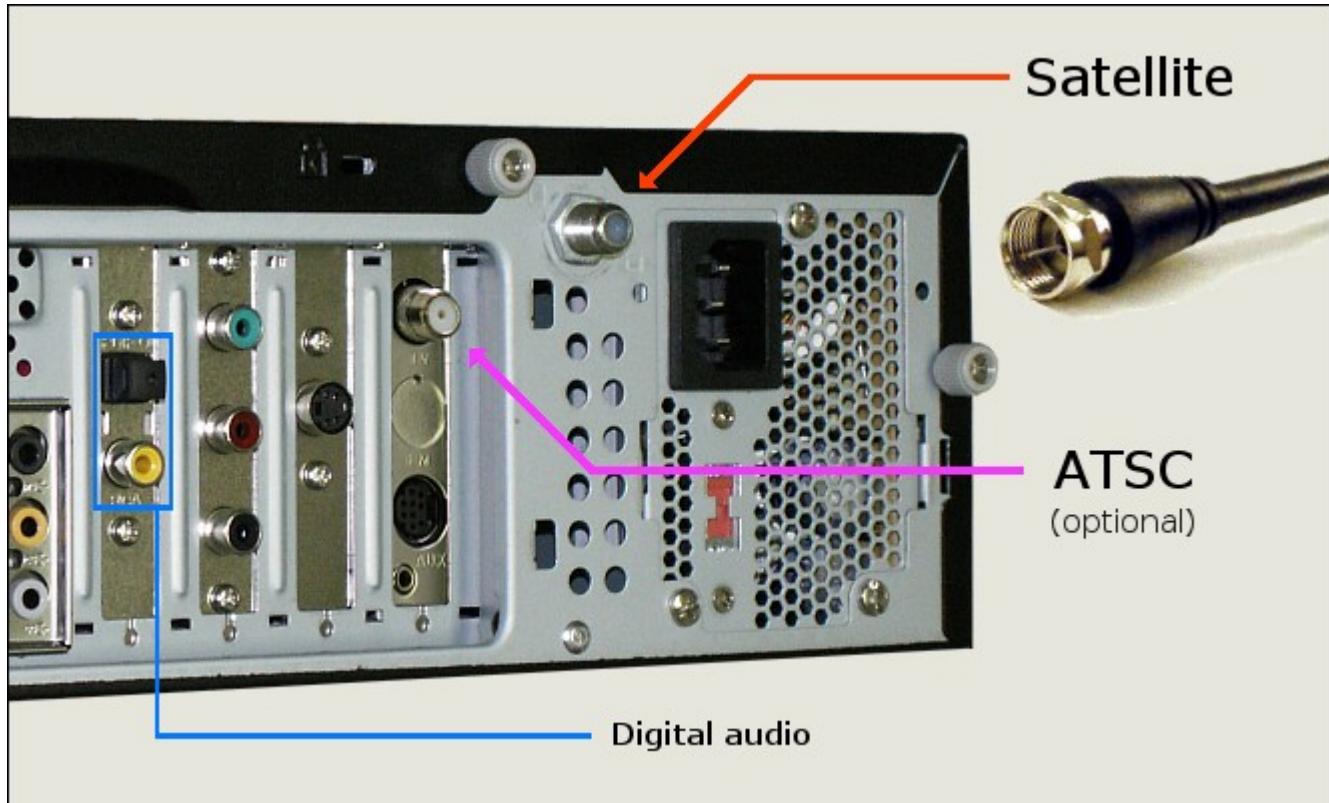
- Digital Audio Optical and RCA connectors
- 75 ohm Dual DVB reception ports
- For dual satellite connections the upper connector in each vertical pair should be connected. The lower connectors should have 75 ohm F Terminators affixed.
(This is important to decrease interference and increase reception quality)
- For a single satellite connection connect the upper connector on the vertical pair closest to the edge of the unit. In other words use DVB # 1

To fully utilize all the functions of the CW-3000HD you should have 2 satellite cables connected to the unit. Both cables need to contain identical feeds.

(ie. You need a dual output LNB with 2 separate lines)

DVB & ATSC

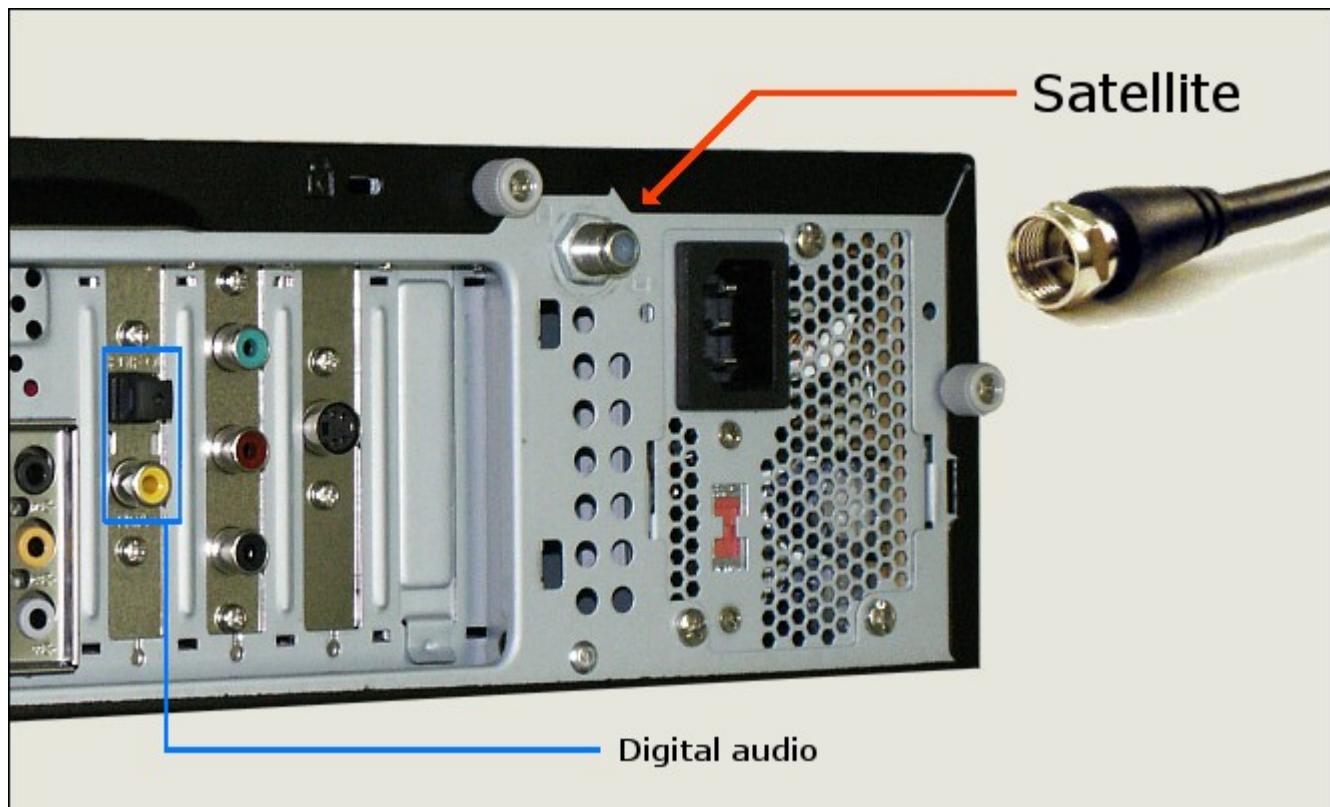
CW-4000HD



- Digital Audio Optical and RCA connector
- 75 ohm DVB & ATSC reception ports
- Connect the satellite cable to the upper most connector nearest the case edge.
- Connect an antenna to the optional ATSC connector.

Single DVB

CW-4000HD



- Digital Audio Optical and RCA connector
- Connect the satellite cable to the upper most connector nearest the case edge.

Quick Start Guide

Owners are encouraged to read through this manual to get familiar with their CaptiveWorks Linux Media Center.

Here is a quick start guide for those who simply must dive in immediately.

1. Connect the receiver to your TV.

Only use 1 video connection between the Media Center and the TV. The CW-3000HD and CW-4000HD are only capable of displaying on 1 device at a time. Shutdown the Media Center before changing the video connection.

Analog audio is connected to the middle green 1/8" minijack on the back panel. Digital audio connection is via the RCA connector. You may connect these simultaneously.

2. Connect the Satellite and or Antenna connections.

Satellite and ATSC tuner system:

Connect the satellite cable to the upper connector of the vertical connector pair.
Connect an antenna to the ATSC connector. It is the single connector.

Dual satellite tuner system:

To fully utilize all the functions of the CW-3000HD Dual DVB system you need to have 2 satellite cables connected to the unit. Both cables need to contain identical feeds.(ie. You need a dual output LNB with 2 separate lines) The upper connector in each vertical pair should be connected. For a single cable connection you should connect the upper connector on the vertical pair closest to the edge of the unit.

3. Connect the network connection.

4. Start the system. The first screen you will see is the adapter settings screen. It is important that you disable any adapters that do not have an antenna connection. Failure to do so will result in erratic channel changes.

5. The second screen will be the display settings screen. IT IS EXTREMELY IMPORTANT THAT YOU SET THESE SETTINGS CORRECTLY. Incorrect settings here may cause you to not be able to view anything but a black screen!.This setting also chooses a video calibration setting that is tailored for the output that you use. Changing the display connection requires changing this setting to get the correct display calibration.

6. The next screen will be to set the system time. Set it correctly.
7. Restart the system for the display settings to take effect. That means press the power button on the remote and then press the yellow button to restart.
8. Check for any system updates. Enter the admin profile. Highlight updates and press enter. Highlight system and press enter. Make note of the current version of the software on your system. Back out to the updates screen and highlight download. Press enter. Highlight the check button and press enter. Compare the update version to your system version. If the update is newer download it. (For those with no network connection, you may use your browser to check <ftp://ftp.captiveworks.org/cw3000hd> for the update file.)
Install the update. Instructions are available in the announcement for the update on the Technical Support forum found at <http://captiveworks.org>.
9. Setup for channels. Enter the admin profile and choose Antenna. Choose satellite or ATSC.
ATSC: (If you don't have an ATSC system, don't bother. It won't work.) The ATSC area allows you to scan for channels. Make sure you have a good antenna connection to the ATSC antenna connector and press the green button to begin scanning. This will configure the channels available to you. Press the blue button to save the list when the scan is finished. If you would like to change the channel numbers you may press the yellow button for Channels and renumber them as you see fit.
Satellite: If you use a switch, choose your switch type. This will enable either 2 or 4 of the positions depending on the switch you choose. Choose the LNB types connected to the switch and then choose the satellite the LNB is aimed at. If you wish to separate the satellites you can add an offset to the channel numbers so you may find each sats channels quickly and prevent overlapping channel numbers. You may set that under edit. 10000 is generally a good number to separate each satellite or provider. Once all is configured click the SAVE button. Next you may scan each satellite you wish to view. Each satellite needs to be scanned separately. Press the blue button to save the results of the scan.
10. Make sure the channels are available in the user profile. Enter the admin profile. Highlight profiles and press enter. Highlight channels and press enter. Ensure that all the channels you would like are in the selected column. You may also remove any unwanted channels if you choose.
11. At this point you're ready to enter the user profile and explore what all is available.

System Bootup



- When first powering on the system you will be presented with this type of a screen. This is what is called the bios splash screen.



- After the bios splash screen another screen much like the first will be presented. (approx. 15-20 seconds unless the files system needs scanning)

System Setup

System Remote Buttons

Remote buttons in GUI screens are as follows:

Up/Down = Move up or down on large buttons or, change values in setup screens

Left/Right = Move from item to item in setup screens

Channel up/down = Scroll up and down a page at a time

Enter = Select item highlighted

Erase (\leftarrow) = Backspace

Back = Move back to previous screen

Red = Context button on bottom of screen

Green = Context button on bottom of screen

Yellow = Context button on bottom of screen

Blue = Context button on bottom of screen

Numbers = Numbers or letters in text entry areas.

The numbers work like a cell phone.

The letters for each number are below the number on the remote.

Main Menu

NOTE: The Linux Media Center will not function without complete initial setup.



Upon boot up this is the initial main log-in screen.

- **Update Messages** – Upper left of the screen is the location of the software update messages. These messages will present themselves when an update is available provided this feature is enabled and the CW-LMC has a connection to the internet.
- **Help** – Upper right of the screen is the Help icon. Pressing the info button on the remote will bring up this user manual.
- **Weather** – Lower left of the screen is the weather applet which displays the current weather conditions in your area once configured.
- **Day/Time** – Lower right of the screen is the date and time which displays the current day and time once configured.
- **Admin** – Section for profile setup and system configuration.
- **User** – The built in initial profile

Admin Profile

Highlight the Admin profile icon from the main menu and press enter.

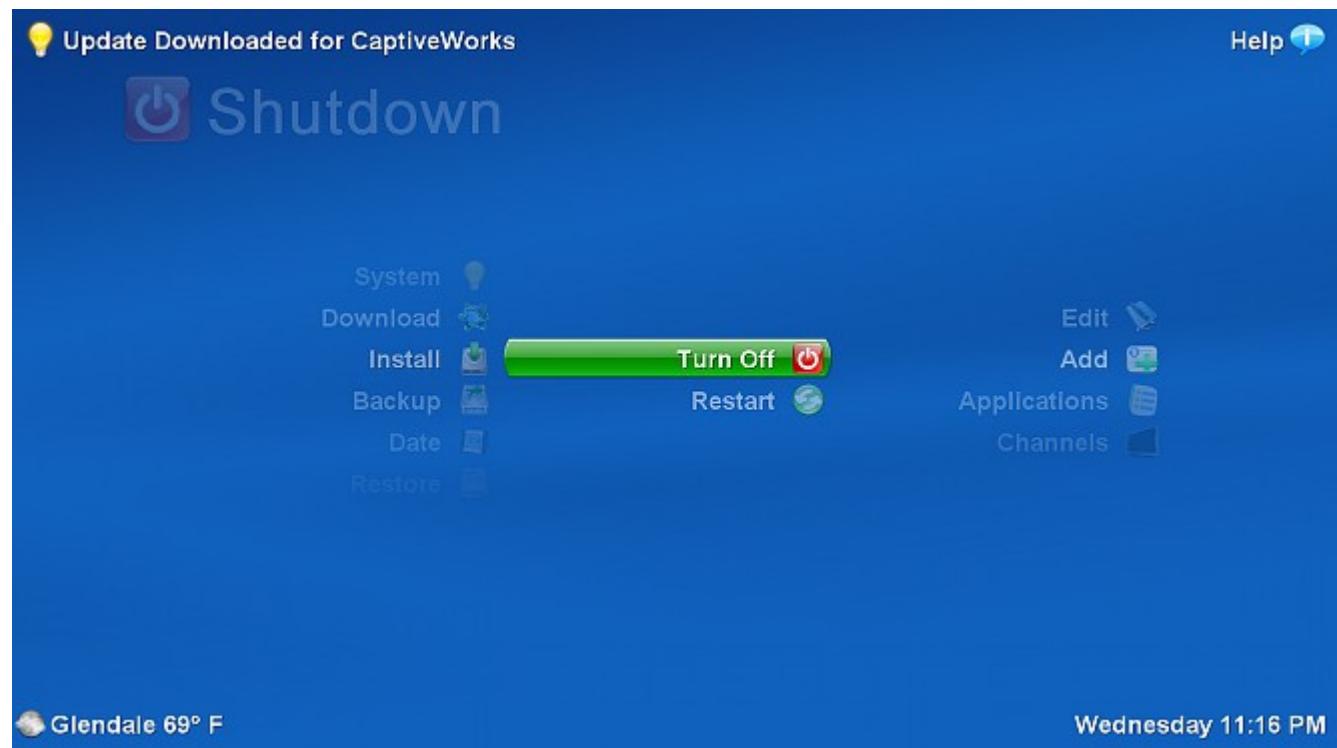
Enter the pin when prompted and press the blue button. (default is 1111)

This will bring up the Admin profile where the majority of the system configuration will take place.

Menus:

- **Shutdown** – Turn off or Restart the system
- **Updates** - System software update download and installation
- **Configuration** – Configuration menu
- **Antenna** - Antenna setup menu
- **Profiles** - User profile creation and setup

Shutdown Menu



- **Turn Off** – Initiate the shut down and power off sequence.
- **Restart** – Initiate the restart sequence. (reboot)

Note: The shut down and power off sequence can also be initiated by briefly pressing the power button on the front of the CW-LMC unit.

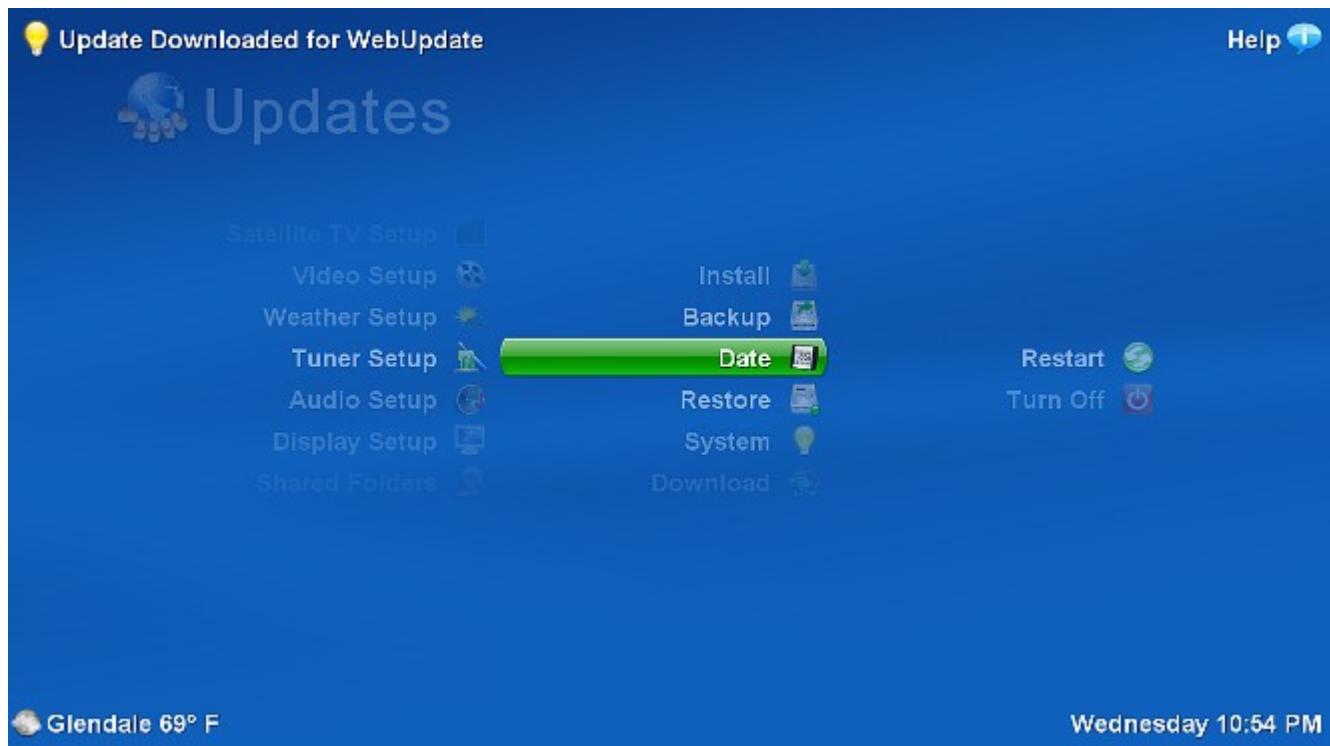
Note: The power button on the remote control is reserved for placing the system into sleep-mode. (ie. powersave state)

Updates Menu

One of the first things anyone with a new product that includes an update mechanism should do is download and install the latest update. This allows the owner to get the latest features and the improved stability of software refinements.

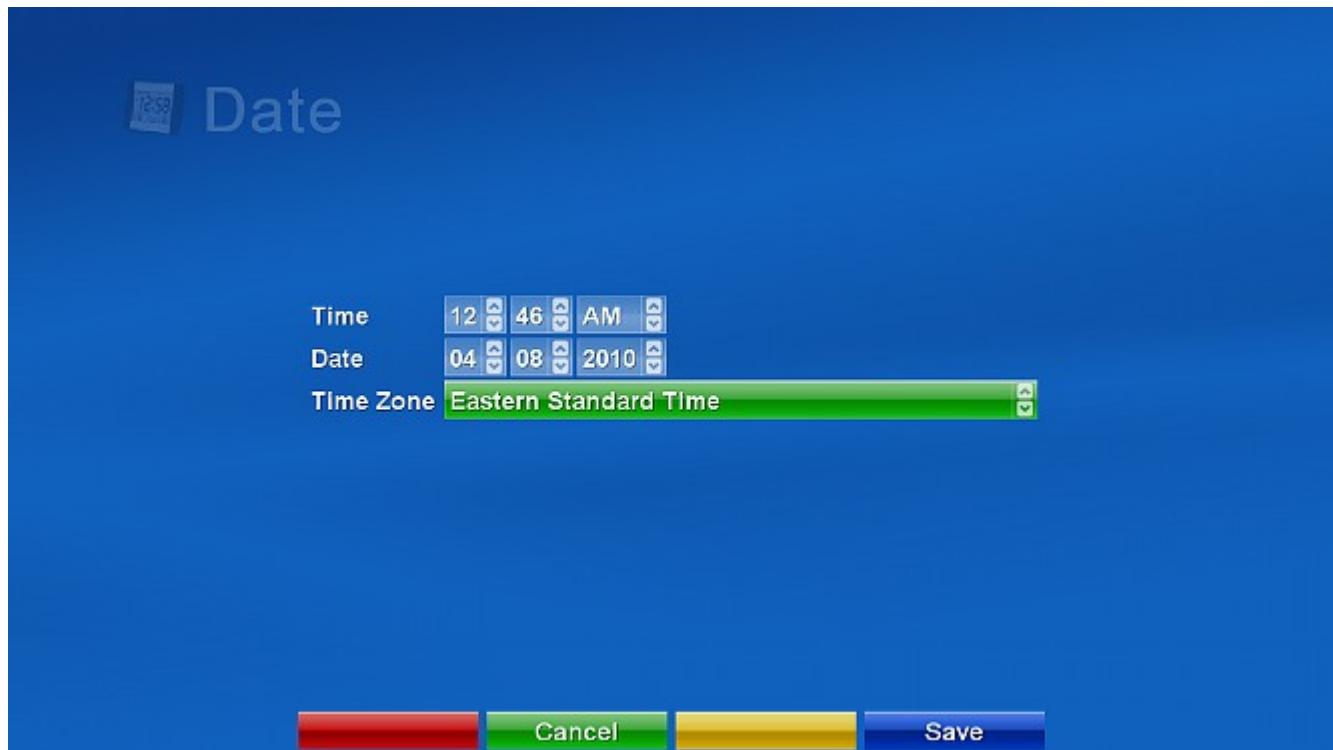
System updates for the Media Center can be installed from the Admin screen.

Press enter on the Updates button to enter the updates screen.



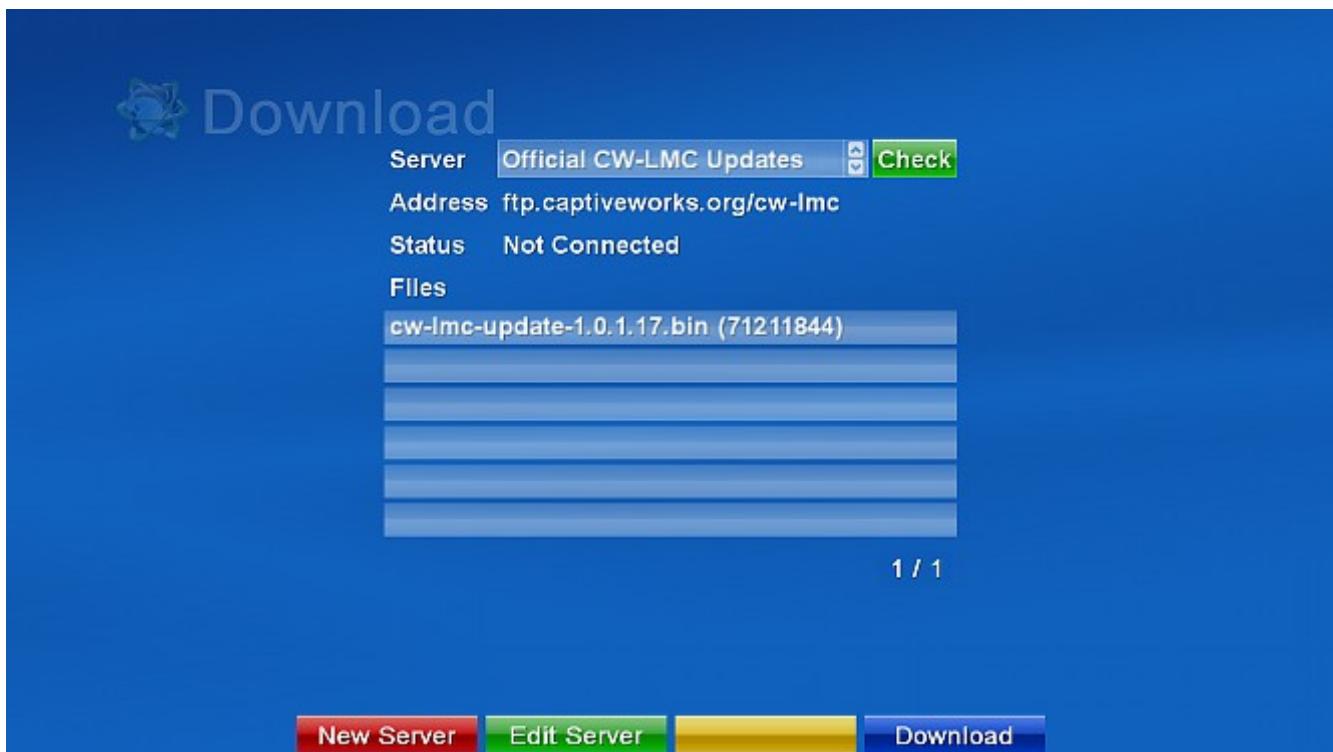
- **Date:** Allows users to set date, time and time zone.
- **Download:** Allows the user to check for and download updates from the internet.
- **Install:** Allows the user to install updates downloaded from the Internet or updates stored on external media.
- **System:** Shows installed software version information.
- **Backup:** Allows the user to create a hard copy of their settings by burning them to disc.
- **Restore:** Allows a user to restore their settings from a restore disc.

Date



- Set the proper date, time and time zone for your area.
(important for the proper operation of the satellite system)
 - Using the arrow keys move the highlighter to the time or date fields.
 - Press enter to edit a field.
 - Press back to return the arrow keys to navigation of the fields.
- Press the blue button to save the changes.

Download



- The default download site is the “Official CW-LMC Updates” site where the Official releases are posted. ([ftp.captiveworks.org](ftp://ftp.captiveworks.org/cw-lmc))
- Highlight the Check button and press enter to connect to the selected server. Once connected it will show a list of available updates.
 - Use the arrow keys to navigate to the Files list.
 - Press enter to highlight and navigate Files in the list.
 - Press back to return the arrow keys to navigation of the fields.
 - Highlight the update you wish to download.
 - Press the blue button to download the update.
- To select an alternate server navigate to the Server currently displayed
 - Press enter to highlight.
 - Use the up and down arrows to choose a server from the list.
 - Press back to return arrow key navigation.
- The red button allows for adding a new server that contains unofficial updates.
NOTE: Please read the notice about unauthorized software updates.
- The green button allows for editing a server listing

Adding and Editing an Updates Server

Name	Homers Web Plugins_
Address	plugins.homersplace.net
Example	ftp_server_address/path
User	anonymous@anonymous.com
Password	anonymous
Update Check	Check for updates and download

Red button | Green button | Yellow button | **Save**

In an open source environment individuals may develop packages for the system independently and share them with the community.

- Having pressed the red button to add a new server or the green button to edit an existing server enter or adjust the following entries:
 - Name** – The name you want to represent the download server as.
 - Address** – FTP address of the server (do not add the ftp://)
 - User** – Username for the FTP server hosting the system updates.
 - Password** – Password for the FTP server hosting the system updates.
(it is possible the password field may not be required for some servers)
 - Update Check**
 - Enable checking of available updates
 - Enable the check and download of available updates
 - Do not check for updates
- Press the blue button to save the new addition or changes.

Install

Installing Software

- Highlight the “Install” button and press enter.
- Highlight and select the style of update. (ie. Local or Remote updates)

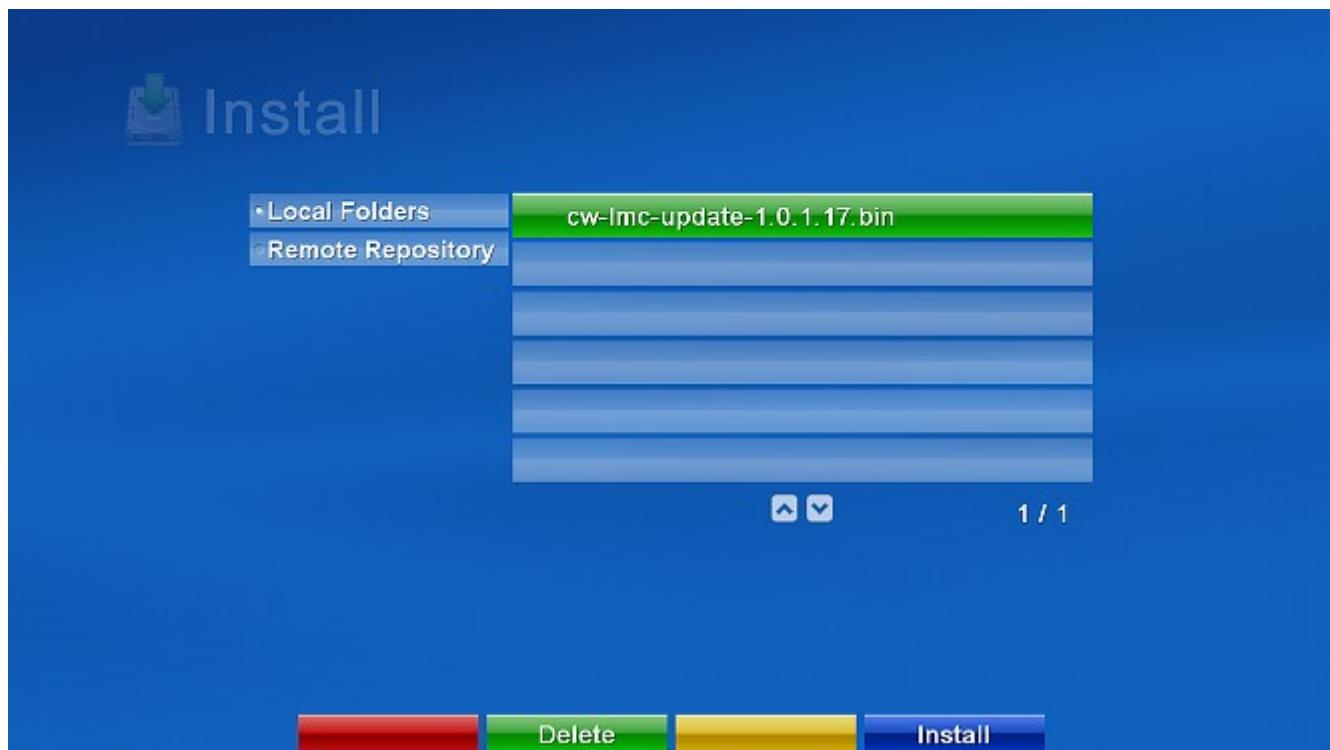
Local Folders:

- A list of directories will be displayed containing “external” and “local”.
- The “local” directory contains any downloaded files from the Internet.
- The “external” directory refers a USB stick or, CD/DVDROM.
- Highlight the appropriate directory and press enter.



- If “local” is selected, a list of your downloaded update files will be shown.
- If “external” is selected, a list of devices will be shown.
 - Highlight the appropriate device (USB, CD, etc) and press enter to see a list of files on the device.
- Highlight the update file and press the blue button to install it.

Installing Software



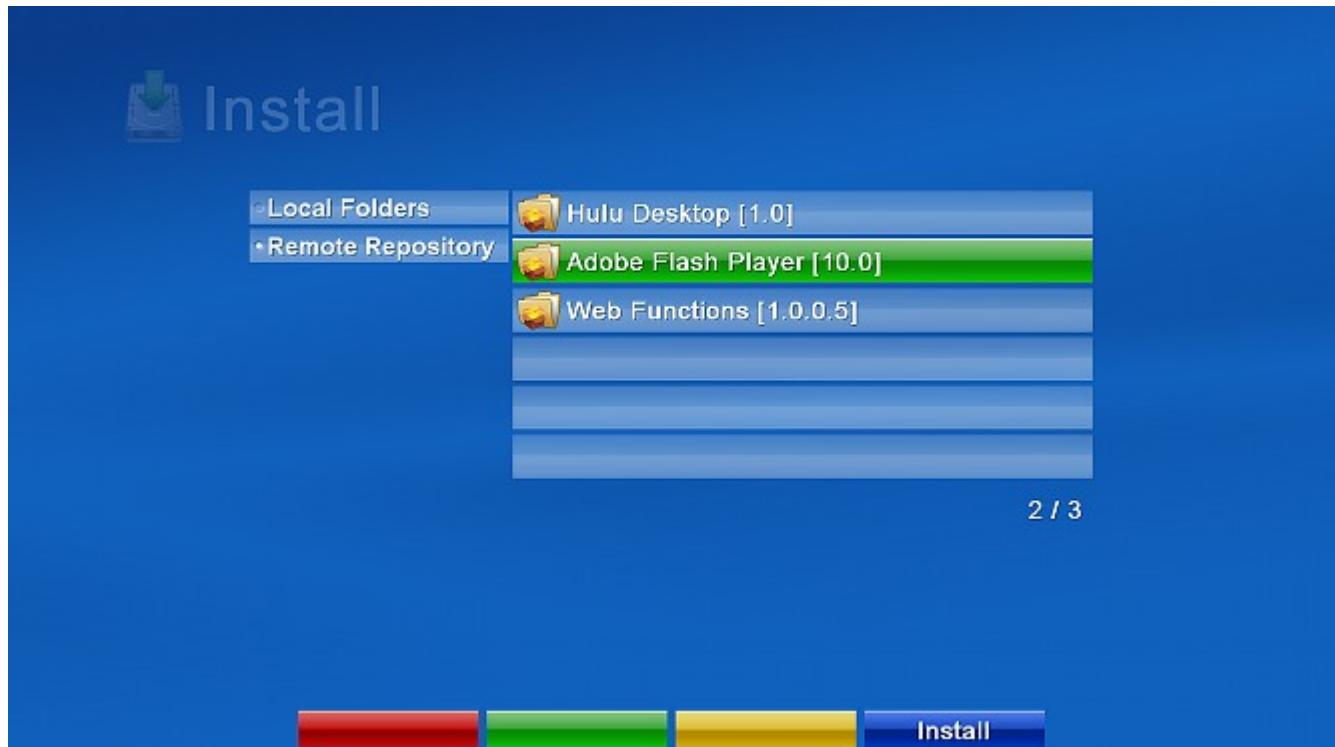
Note: The external directory is used when the user has update files on an external device (e.g. USB stick) instead of downloading it using the download utility.

If you have questions about the update process please visit the on-line forum.

Installing Software

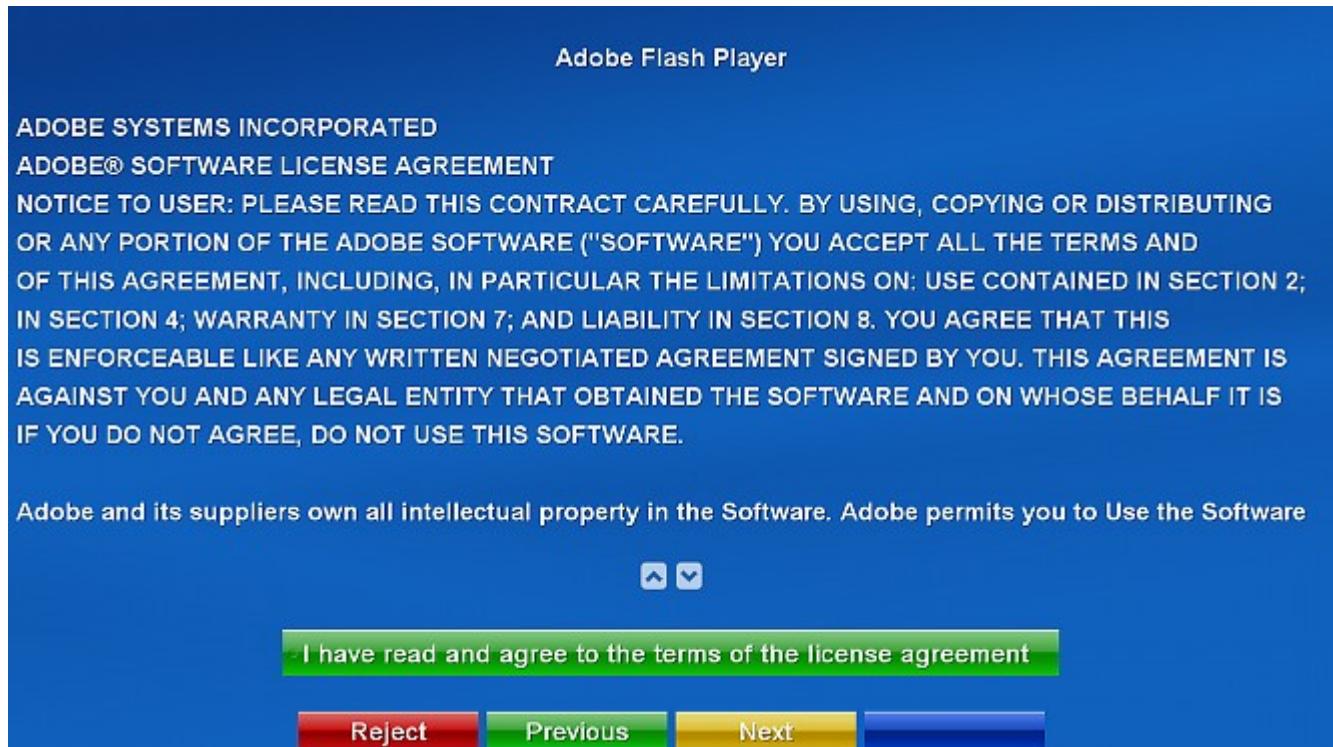
Remote Repository:

The remote repository contains optional products designed to add functionality and enhance the system.



- When the Remote Repository is selected a list of products will be displayed.
- Highlight the appropriate product and press the blue button to install.
- Provided the product has no License Agreement the system will fetch the product package, extract then install.

Installing Software



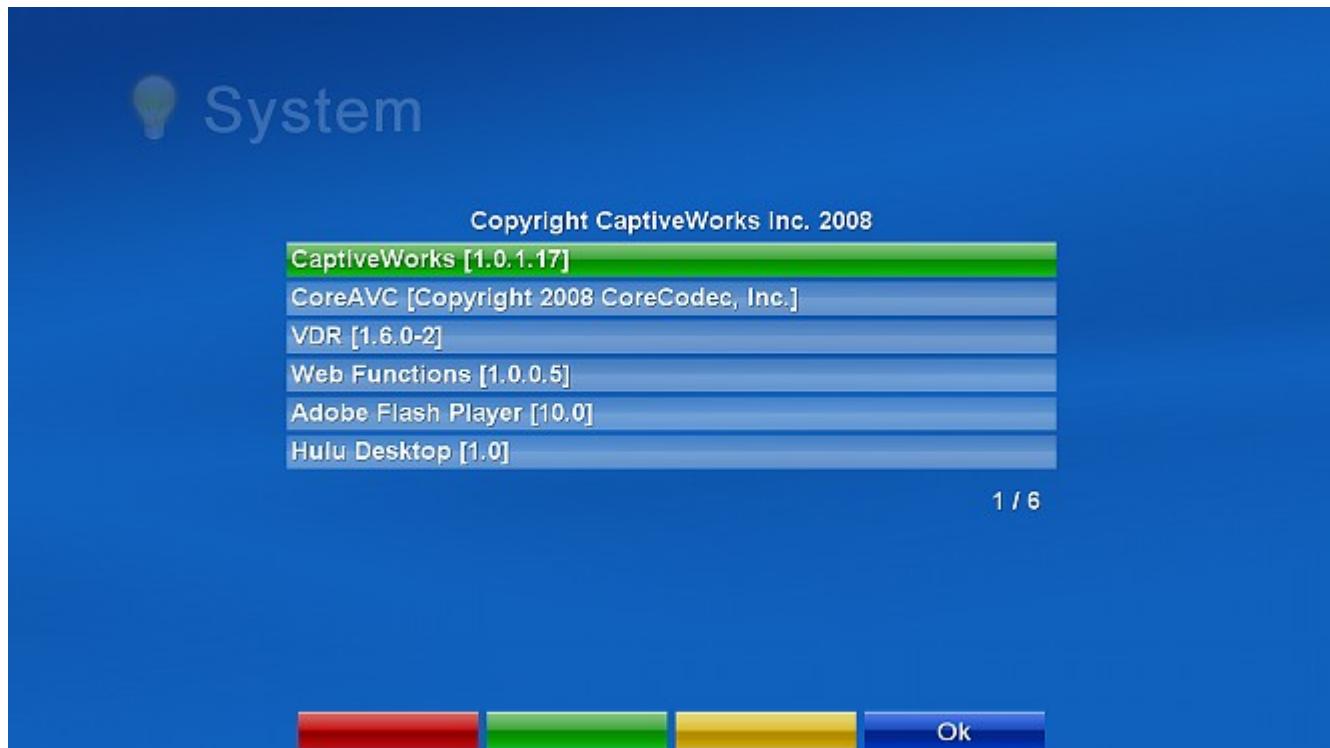
- If the product has a License Agreement you will be presented a screen containing the License Agreement text.
- Use the up and down arrows to scroll the text
- If there are multiple pages of text use the green and yellow buttons to switch between the pages.
- If you have read and agree to the terms of the License Agreement press the enter button to confirm.
- Once confirmed the blue button install button becomes active.
- Press the blue button to install the product.
- Press the red button to reject the License agreement and cancel the installation.

NOTE: Provided there is an Internet connection the system will automatically download, extract and install the selected product.

If you have questions about the update process please visit the on-line forum.

System

Checking the Version of Software on the System



- The system button in the Updates Menu displays the installed software version information.
- Use the up and down arrows to scroll through the list of installed software
- Click the blue button to exit the screen..

Backup



Backup

Insert blank recordable CD/DVD disc



Restore



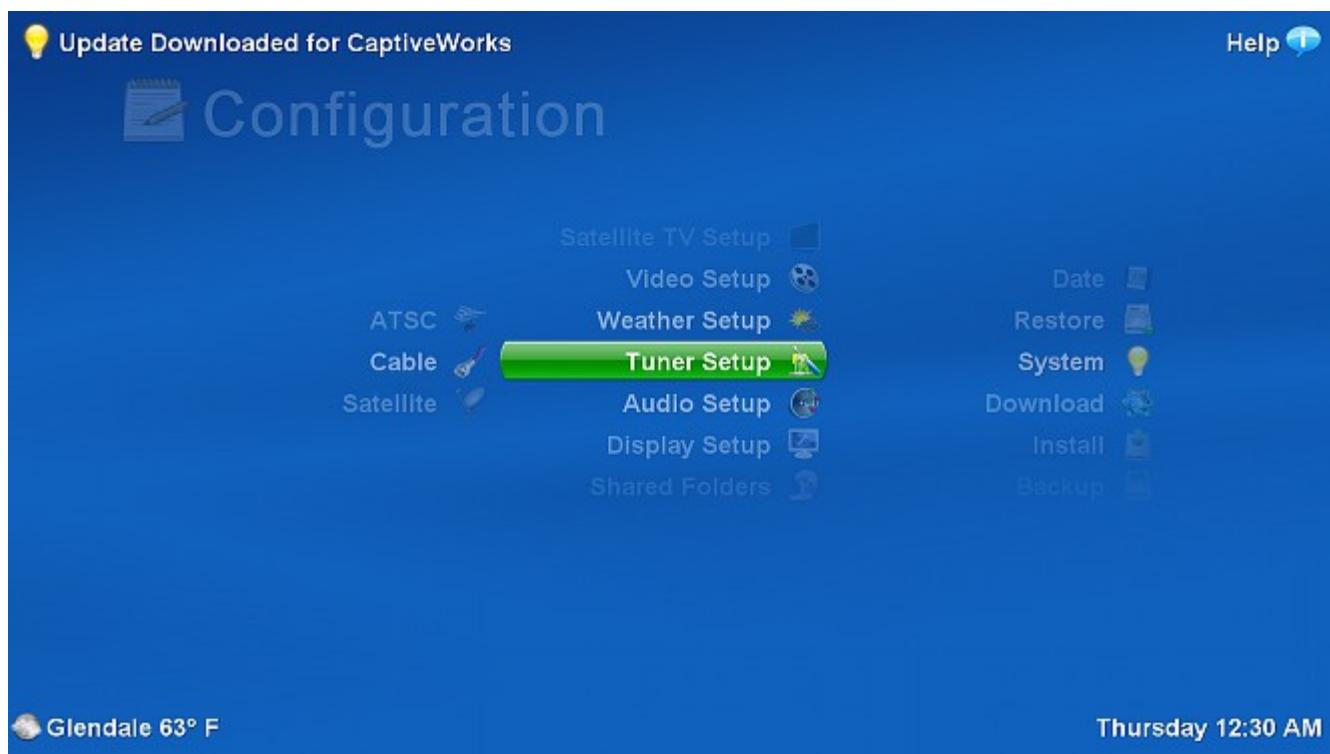
Restore

Insert CD/DVD disc containing backup data



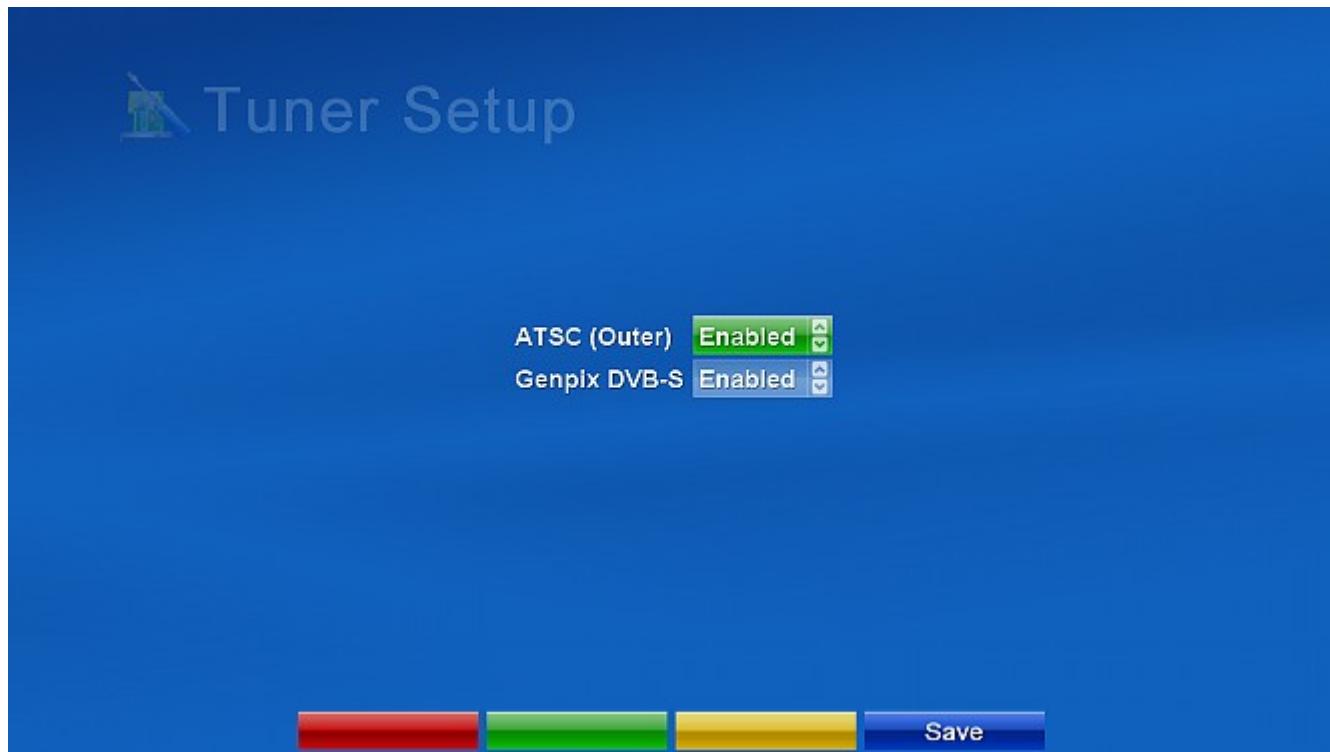
The Backup and Restore function allows you to create a hard copy (CD) of your settings once you have everything exactly the way you want it so that you can restore them if needed. (It is important to continue your setup before creating a backup)

Configuration Menu



- **Tuner Setup** – Enable and disable internal and external antenna adapters
- **Display Setup** – Configure display settings for connected display device
 - **Size** – Adjust the viewable area if display device suffers from overscan.
 - **Timeout** – Enable, disable and configure the screen blanking function.
 - **Themes** – Change the default menu theme.
- **Network Setup** – Configure type of network connection, hostname, and workgroup
- **Audio Setup** – Audio Output setup
- **Storage Setup** – Set up an internal hard drive that's been added to the system.
- **Shared Folders** – Configure the mounting of external file servers.
- **Satellite TV Setup** – Configure Satellite TV options.
- **Video Setup** – Enable or disable deinterlace behind OSD.
- **Weather Setup** – Configure location and update frequencies of weather applet.

Adapter Setup



Depending on the model or configuration of your CW-LMC and whether extra external Genpix tuners have been added it is important to disable any tuners you do not intend to use. Possible (multiple) entries in this list could be:

- DVB-S
- ATSC
- Genpix DVB-S

Display Setup



- Select the type of physical video connection you wish to utilize.
 - If the connection is HDMI select whether audio over HDMI will be used.
- Set the display mode if necessary. (NTSC for North America – PAL for Europe)
- Select the display resolution that corresponds with your TV hardware capabilities. (CAUTION: Ensure you are selecting settings that your hardware supports)
- Select the aspect ratio you wish to use (16:9 for wide screen)(4:3 for regular TV)
- Fill mode is a function that (by default) stretches 4:3 video to fill a 16:9 screen.
- It is recommended to set Auto-detect to "Yes" ("No" should be used with caution)
- Press the blue button to save the changes
- After saving your settings you will be prompted to restart the Media Center
- The preferred method is as follows:
 - 1.Back out and navigate to the Shutdown Menu.
 - 2.Select shutdown.
 - 3.Physically hook up the appropriate cable matching the mode you've selected.
 - 4.Power on the CW-LMC

NOTES: Only use 1 video connection between the CW-LMC and the TV. The CW-LMC is only capable of displaying on 1 device at a time.

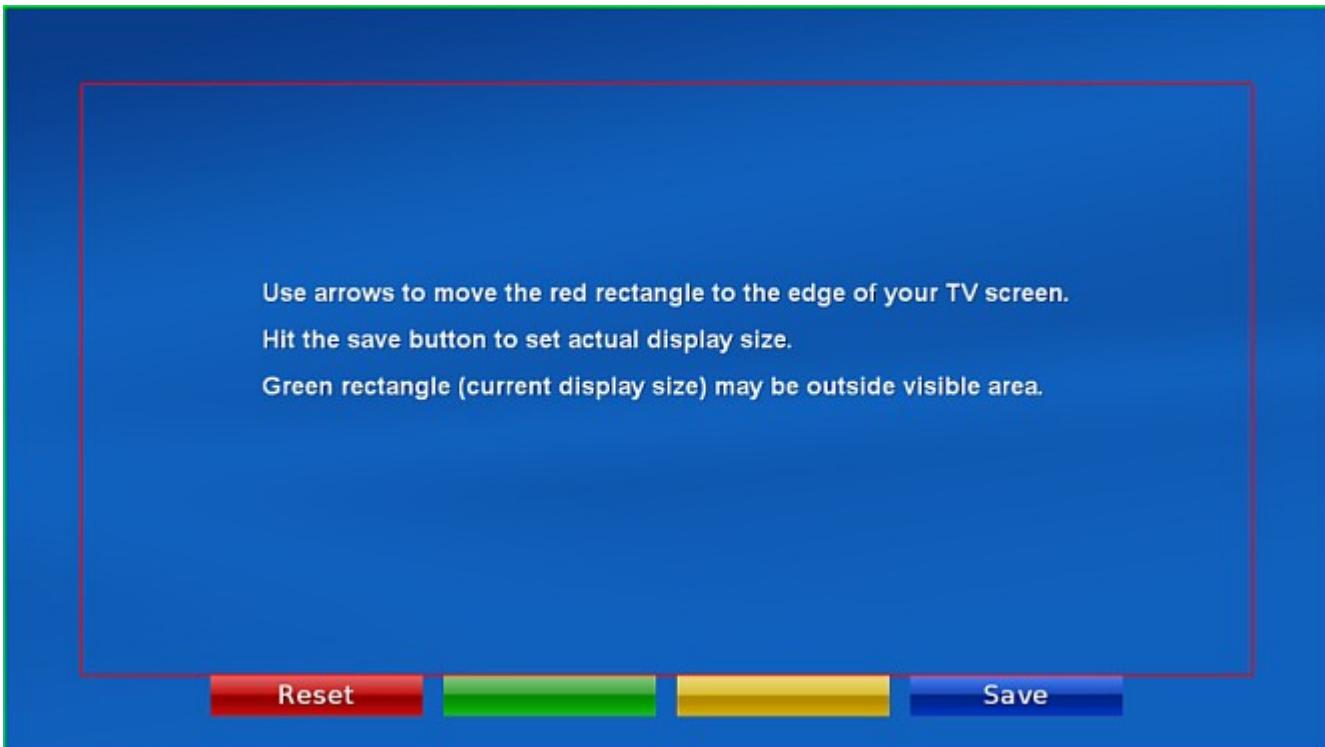
If after powering up and waiting until the boot-up screen reaches 100% there is only a blank screen wait three seconds then aim the remote control directly at the front of the Media Center and type in 1346. This will cause it to reboot with default video settings. Return to Display Setup and select a compatible setting.

Size Setup

Once you have powered up the Media Center with the appropriate Display Resolution you can adjust the size to compensate for any TV over-scanning.

If you are not experiencing any over-scan you can skip this step.

- Press the red button to configure size

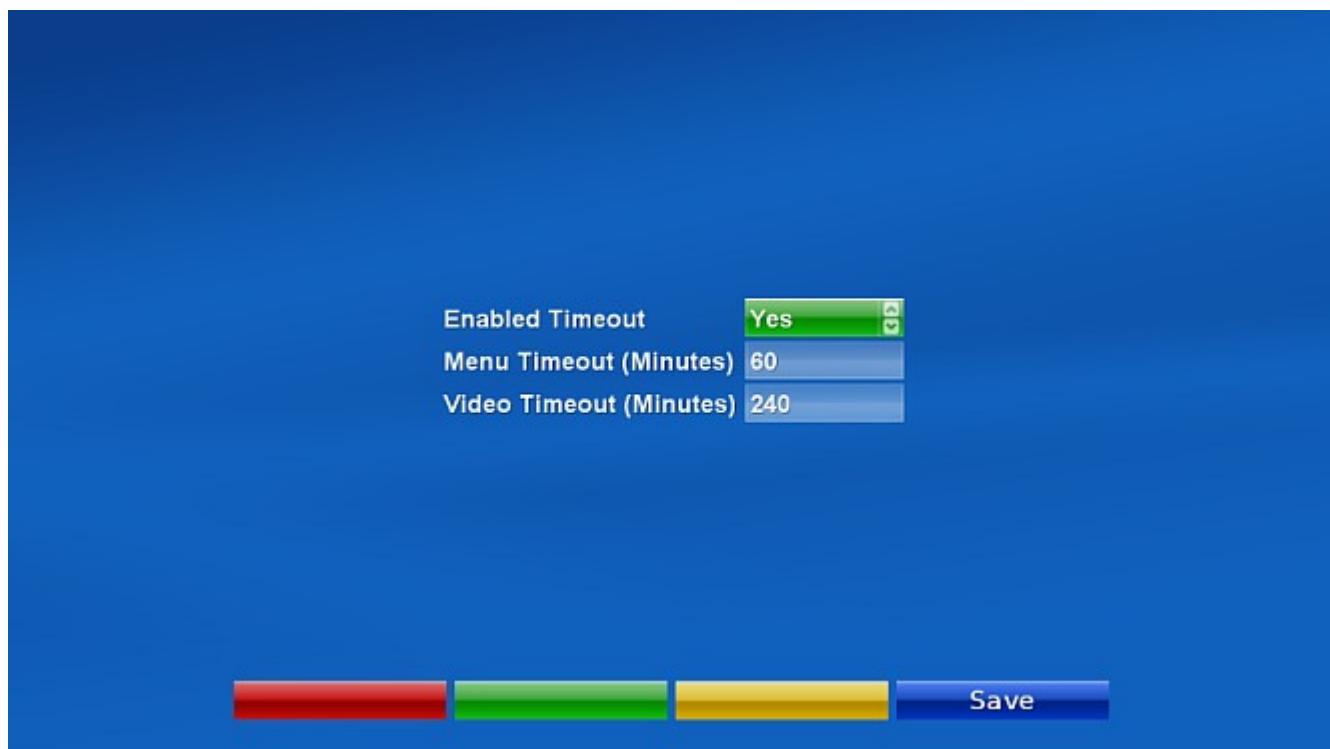


Some models of Televisions are designed with a set amount of over-scanning. What this can translate to is a certain amount of picture being displayed outside the physical dimensions of the screen. For normal TV viewing it is generally unnoticeable, but when it comes to an application like the web browser this can be unacceptable.

- The green box is the current setting the Media Center is using.
- Adjust the size of the red box by using the arrow keys so that it is at the extents of your viewable area.
- Press the blue button to save the changes
 - The menu button elements will be restricted to within the set size.
 - The Web browser should now be the correct size for your TV.
 - The Satellite TV program guide will be automatically put into cropped mode.
(Rebooting is not necessary)
- Press the red button to reset the setting to full screen.

NOTE: Some new TV's have different 'HD mode' settings in their Advanced menu. If you are experiencing over-scan it is recommended that you check your TV for settings that provide a larger viewable area before using this size adjustment.

Timeout Setup

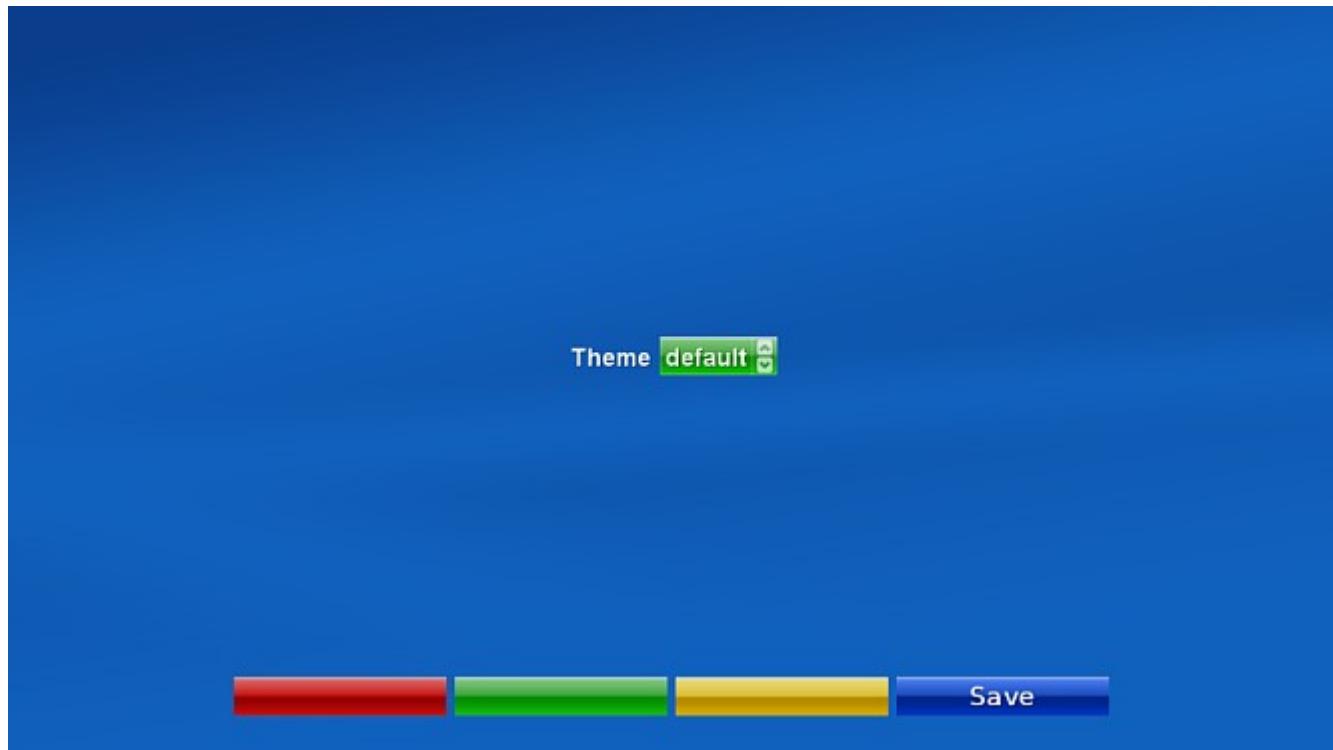


Timeout is meant to be a preventive measure against screen burn-in. It is disabled by default. If screen blanking is desired during times of inactivity the user can enable this Timeout function.

The 'inactivity' timeout values can be adjusted to the users preference.

- To enable Timeout highlight the field and set to Yes.
- To adjust the separate Menu and Video timeout values highlight and set the desired values.
- Press the blue button to save the settings.

Themes Setup



Themes are meant to provide the user with the ability to customize the appearance of the main menu system of their Linux Media Center.

- To adjust the present theme highlight the Theme field
- Use the up and down arrow keys to scroll through the list of available themes.
- Press the blue button to save the settings and apply the new theme.

NOTE:

The themes included on the system are black, cloud, default, drive, and nebula. More themes can be created manually by adding a folder in /usr/local/java/themes and placing your own icons and images in it. Visit and search the forum for examples.

Network Setup

The screenshot shows a 'Network Setup' interface with the following configuration:

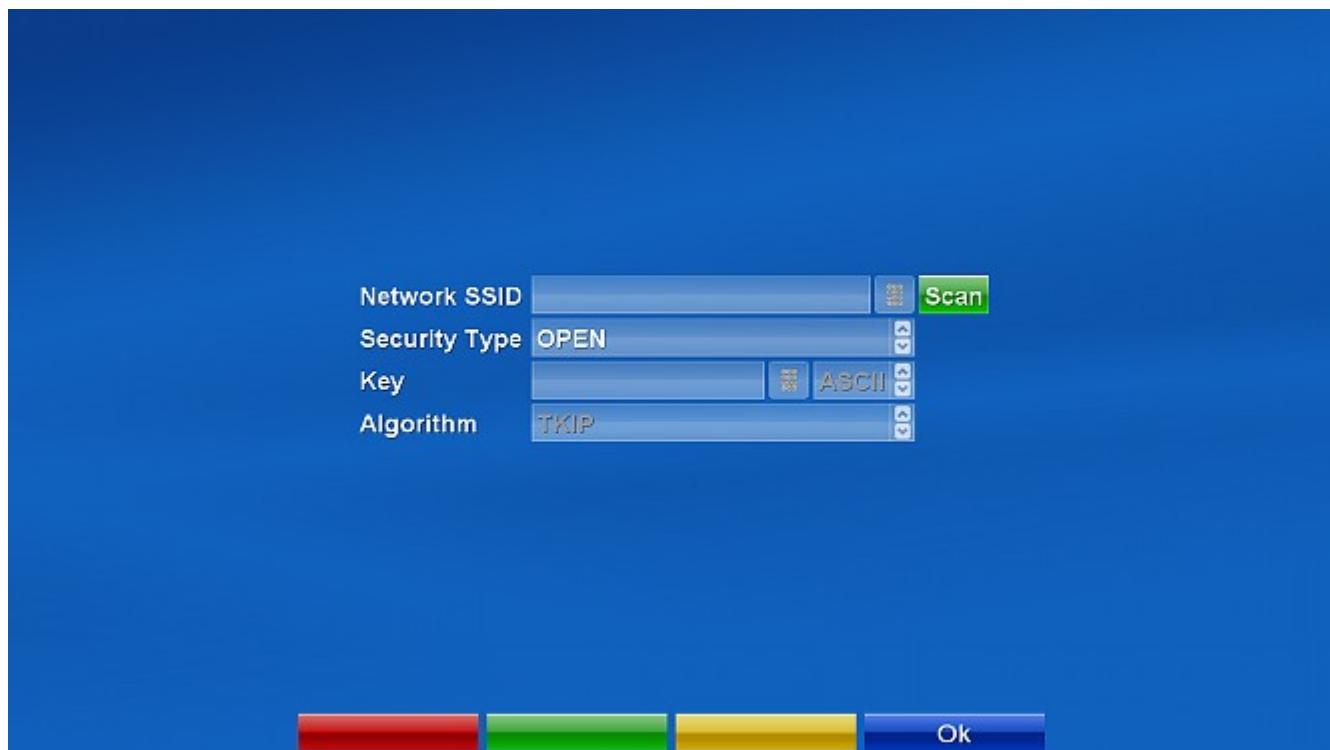
Device	Ethernet
Enable Network	Yes
Name	cw-lmc_
Workgroup	WORKGROUP
Connection Type	Obtain Address Automatically
IP Address	0 * 0 * 0 * 0
Gateway	0 * 0 * 0 * 0
Net Mask	255 * 255 * 255 * 0
DNS 1	0 * 0 * 0 * 0
DNS 2	0 * 0 * 0 * 0

Buttons at the bottom include: Current IP (red), Save (blue), and another blue button.

- Choose Enable Network: Yes to enable the network
- Choose Enable Network : No to disable the network.
- Enter the Name you want your Media Center to be identified as on your network. This variable should be a unique name so that it does not conflict with any other client machines on your home network.
- Enter the Workgroup you want your Media Center to belong to. This variable should be the same as the rest of your home network.
- 'Obtain Address' assumes DHCP is being used on the network and needs no further setup. (Most home networks with a router will use DHCP as a network configuration)
- Enter Network Information if static addressing is being used. The IP Address, Gateway, Net Mask and, DNS boxes need to be filled as appropriate for the network.
- Press the blue button to save the changes
- Press the red button to view the Current IP
(useful information for diagnosis and connecting to network shares)

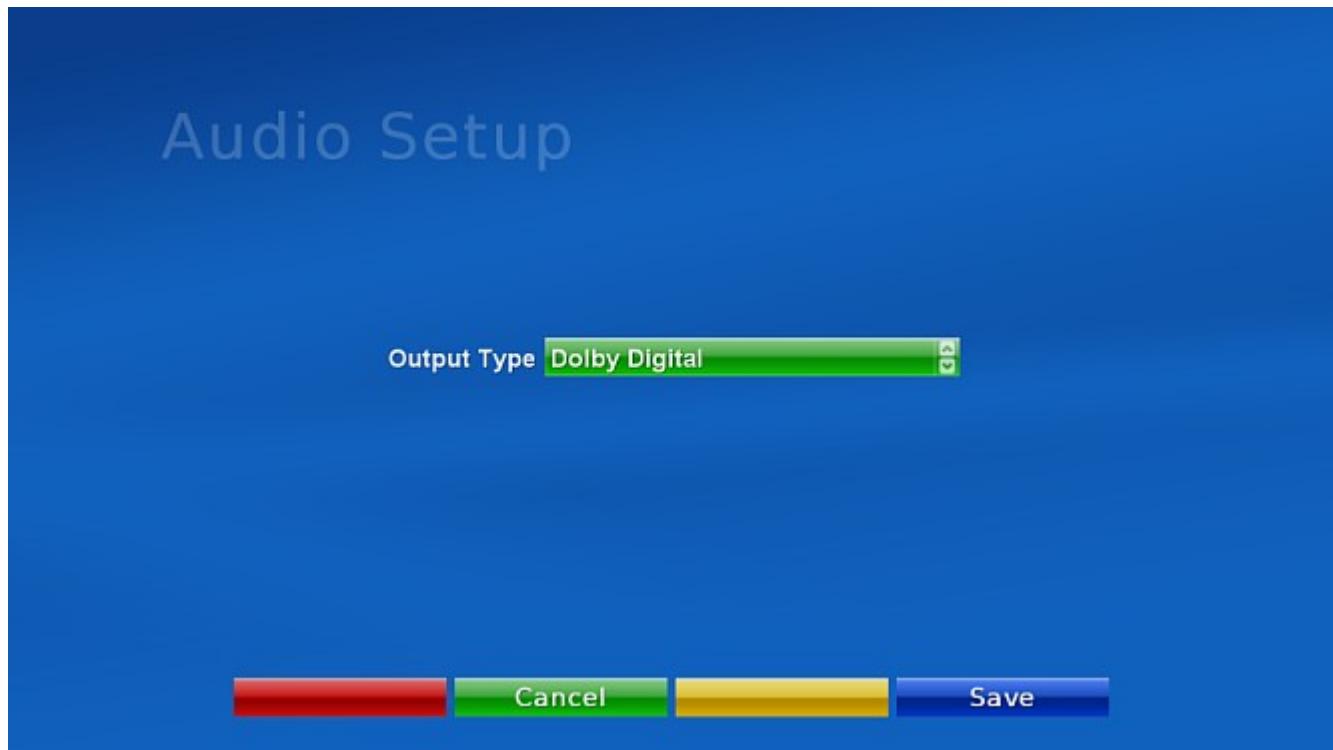
Wireless Network (optional hardware)

- Highlight the Device field and select Wireless.
- Press the yellow configure button to present the wireless screen.



- Highlight the Scan button and press enter to present the scan screen.
- Press the red scan button to perform a scan for visible wireless networks.
- Highlight your wireless network in the list and press the blue button.
- Network SSID is typically a 32 character alphanumeric key uniquely identifying a wireless LAN (local area network)
- Security Type specifies the type of encryption used if any.
 - OPEN signifies no encryption. (CAUTION: This setting is mainly for testing)
 - WEP is a deprecated form of encryption known to have weaknesses.
 - WPA is an intermediate form of encryption to take the place of WEP.
 - WPA2 is an advanced form of encryption mandatory in all new devices to bear the Wi-Fi trademark.
- Key type can be a passphrase or hexadecimal depending on the requirements.
- Algorithm signifies the protocol type used in conjunction with the encryption type.
(ie. WPA TKIP is known to have some vulnerabilities)
- Once the fields are correct press the blue button to save.

Audio Setup



- Analog and PCM

This default setting passes analog audio through the analog output and PCM digital audio through the SPDIF output.

(select this if you want to use the volume control of the CW remote)

- Dolby Digital

In the case of a channel that has an AC3 audio track the analog output will be disabled. The AC3 stream will pass to the SPDIF output and a Dolby Digital decoder will be required to listen to the audio. This will also allow viewing of DVDs with a DD/DTS audio track.

In the case of a channel that has both PCM and AC3 audio tracks you can choose between the tracks by pressing the Audio button on the remote. 33 is an AC3 track. 1 is generally English PCM audio and other numbers are alternate language PCM tracks.

Storage Setup

The CW-LMC comes with an automated storage setup system that allows users to uncover enhanced features for improved usability and performance.

**You've chosen to install an internal hard drive.
Here are some basic pointers and steps.**

What you'll need:

- Hard drive device
- The appropriate interface cable
- Phillips screwdriver
- Needle-nose pliers (IDE only)

NOTE:

If you do not understand these instructions or lack good manual dexterity, have a qualified technician install the hard drive for you.

If at any time you are in doubt, look for more information. There are plenty of resources on the web as well as the CaptiveWorks forum.

1. Turn off the Media Center, unplug it, and take the top cover off.
2. Make sure that you are properly grounded and if possible do the installation in an uncarpeted area.
3. a. Facing the front of the CW-3000HD the hard drive bays are on the right hand side. Undo the top screw holding the hard drive carriage and swing it up and out.
b. Facing the front of the CW-4000HD the hard drive bay is on the left hand side. Click the door to open and slide the hard drive into place.
4. Position hard drive in drive bay carriage and secure it with screws.
5. - **IDE:** Connecting an IDE Hard drive: (**CW-3000HD rev.1 only**)
 - a. Ensure that the jumper is set so that the hard drive will function on its own cable. This is usually Master though some hard drives vary. Refer to the hard drive manufacturer specifications.
 - b. Connect the data (ribbon) cable to back of hard drive. Align the colored band of the cable with pin No. 1 of the hard drive.**- SATA:** Connecting a SATA Hard drive:
 - a. Connect the SATA cable (skinny flat) to the back of the hard drive.
6. Connect the power cable from one of the connectors on power supply.
Both SATA and 4 pin molex power connectors are available.

7. (CW-3000HD only)
 - a. Slide the hard drive/carriage unit in at an angle and swing/rotate down into place.
 - b. Re-fasten the top screw that holds the hard drive/carriage assembly.
8. Double-check your connections and ensure the fan(s) are clear of any dangling wires.
9. Re-attach the top cover and screws.
10. Connect the power cord to Media Center and power it on.
11. Enter the Admin -> Configuration -> Storage Setup menu.

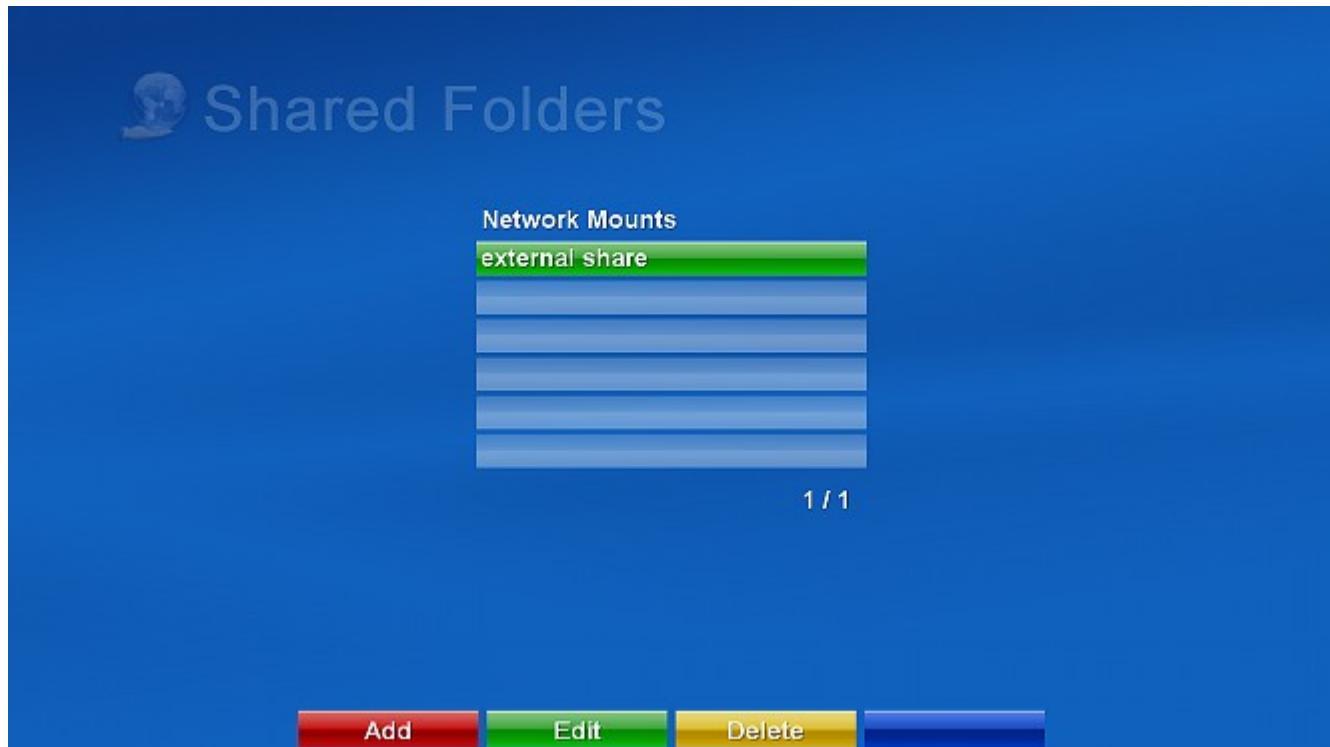


12. At this point the menu will inform you to remove any USB devices
13. As it restarts the Media Center will go through a hardware check and determine if it can safely begin the Storage Setup process.



14. You will see this screen while it partitions, formats and writes the necessary files.
15. It will reboot to the same style screen without the message for approx. 30 seconds before it reboots a final time.

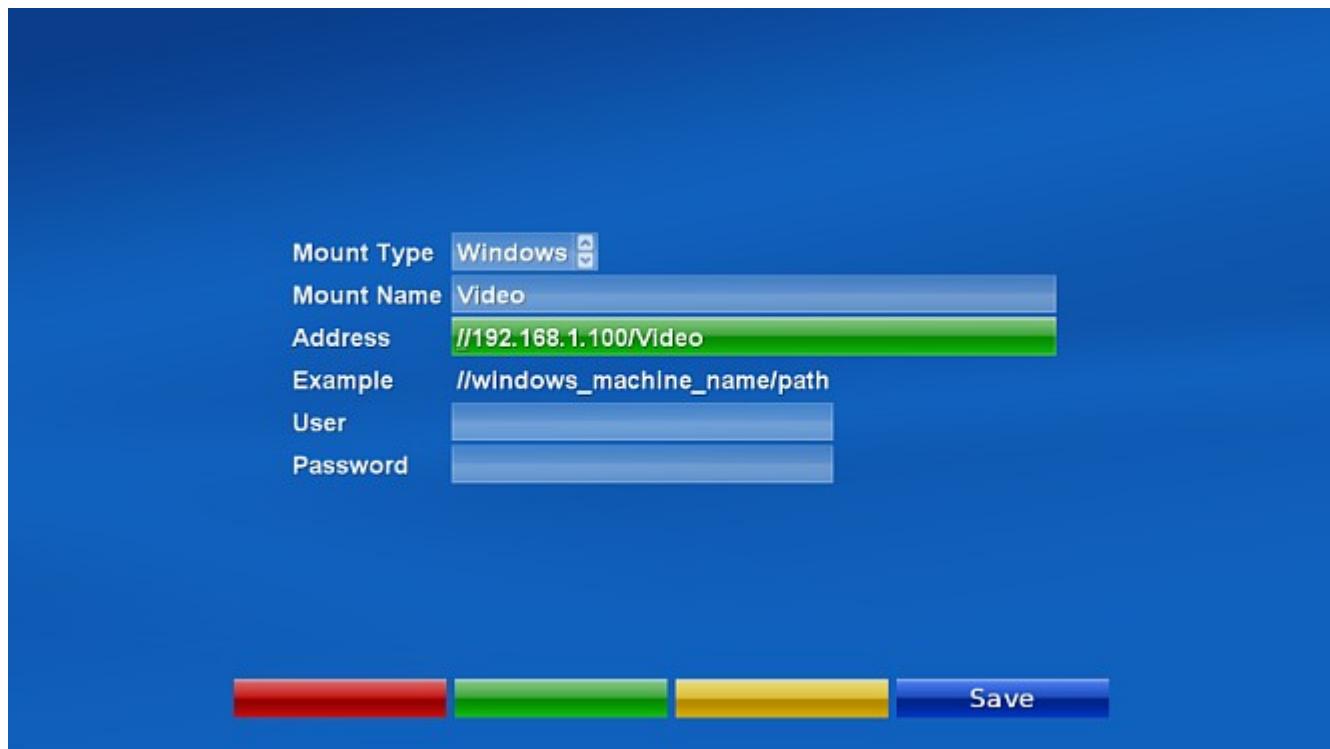
Shared Folders



The Shared Folders function supports the mounting of Windows style shares. Once you have enabled sharing on a folder on your PC you will be able to configure the Media Center to automatically mount that shared folder upon boot up.

- Press the Red button to Add a shared folder
- Press the Green button to Edit an existing shared folder
- Press the Yellow button to delete an existing shared folder

Adding and Editing Shared Folders



- Mount Name – Enter a descriptive name by which you would like the share identified.
- Address – Using the provided example as a reference enter the machine name and path to the network share.
- User – Enter the username for the share (if required)
- Password – Enter the password for the share (if required)
- Press the blue button to save.

Notes:

It is usually best to use the numeric IP address of the Windows machine serving the network share instead of relying on the machine's browser service to resolve the name because it can be quite slow to update at times.

Use / (forward slash) not \ (backslash).

The \ typically used on Windows machines will not work.

Users will be able to access the shares under 'External' in their profile.

Satellite TV Setup



- Guide Type – Select your preferred style of guide from the available options.
- Guide Auto Scan – Option to automatically update the EPG information.
 - With a dual tuner setup, with both enabled, the second tuner will walk through the transponders in your channel list looking for guide info as long as it's not recording. That will happen in the background and you won't know it's happening other than you will have guide info as long as you keep the system running for a reasonable amount of time.
 - With a single tuner enabled the scan will start after 5 hours of inactivity. This means the screen will go blank while the scan is going on. Leave the system on overnight and you will wake up with all the guide info you have available to you. You will have to change channels to bring the video back. A simple channel + channel - will take you back to where you were.Bear in mind neither of the above scenarios will generate guide info immediately in most cases. It will take some time to work through the transponders available to find the guide data. If you need it immediately you will have to tune to a transponder that contains guide data. What channel that may be depends on the satellite(s) you are pointed to.
- Guide and OSD theme – Select from Default and Theater (low contrast theme)
- Default Timer Action – Default Timer Action field when a timer is created
- Skip Forward – Number of seconds a skip forward skips when key is pressed
- Skip Back – Number of seconds a skip back skips when key is pressed
- Press the blue button to save.

Weather Setup

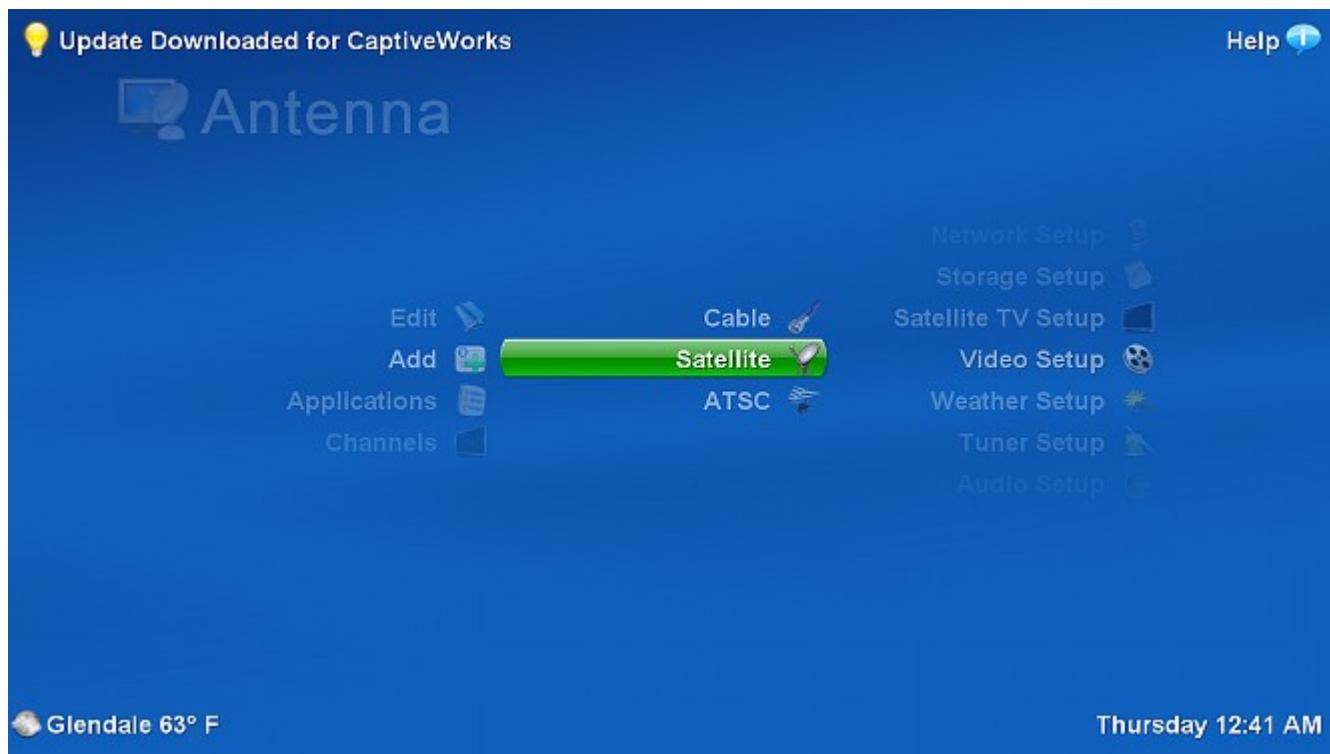
The screenshot shows a weather setup interface with the following configuration:

City	Glendale, California, United States	<small>SEARCH</small>
Measurement Units	Fahrenheit	
Update Frequency	30 minutes	
Enabled	Yes	

At the bottom, there are four buttons: Clear (red), **Save** (blue), and two unlabelled green and yellow buttons.

- Highlight the City field and clear it's contents.
- Enter the name of the city where you are located and the system will check for that city name.
 - If there are multiple cities with that name, it will give you a list to choose from.
 - If there is one city, it will automatically select it.
- Adjust the measurement units to suit your tastes. (Celcius or Fahrenheit)
- Adjust the Update Frequency to how often the system should check for new weather updates.
- Press the blue button to save.

Antenna Menu



- Select the type of antenna to configure.

Satellite Setup

Satellite

Port	LNB	Name	Scan	Edit
No. 1	Linear	S87.0W AMC 3	Scan	Edit
No. 2	Linear	S97.0W Intelsat Americas 5	Scan	Edit
No. 3	Linear	S105.0W AMC 15	Scan	Edit
No. 4	None	None	Scan	Edit

Scan All **Add Sat** **Channels** **Save**

- Choose either a switch type or None for a single LNB.
Supported switches:
 - Diseqc: Typical 4 port committed diseqc switch.
(Also applies to DP34 and DPP44 switches)
 - Mini Diseqc: 2 port "Toneburst" switch.
 - 22 KHz.: 2 port "Tone" switch.
 - Uncommitted: Typical 2 port or 8 port uncommitted switch
- One LNB/Satellite needs to be setup at a minimum.
- The port lines correspond to a diseqc switch port numbers.
- Fill out each line accordingly with LNB type in the LNB column.
 - None: No connection.
 - Universal 1: Universal Linear polarized dual LOF (9750/10600)
 - Universal 2: Universal Linear polarized dual LOF (9750/10750)
 - Circular: Circular polarized single LOF (11250)
 - Linear: Linear polarized single LOF (10750)
 - DP Circular: Dish Pro™ Circular polarized single LOF (11250) with bandstacked Left transponder frequencies.
 - DP Linear: Dish Pro™ Linear polarized single LOF (10750) with bandstacked H transponder frequencies.
 - WB Circular: Wide Band Circular polarized single LOF (10750) covering both FSS and DSS bands.
 - Switch: If you have multiple switches cascaded, this will allow setting the second switch by going to the edit button.
 - Motor: This allows configuring a motorized system by going to the edit button.

- Fill in the satellite that each LNB is aimed at in the name column.
- Press the blue button to save the changes.
- Highlight the Edit field and press enter to specify offset or modify the transponder frequencies of the satellite. (Press save when complete)
- Highlight the Scan field and press enter to scan an individual satellite.
- All configured satellites may be scanned with the red “Scan All” button.
- A satellite that is not listed may be added with the green button.

Notes: (You can also chain switches)

When switch is set to Uncommitted the bottom arrows move to additional screens to set up more satellites.

Only one LNB type will work with a given LNB. Choosing the incorrect LNB type will result in either not scanning any channels or missing large numbers of channels. How do you know which LNB type you have? The simplest way to know is to look at the LNB. There will be a label that will list the frequency range, LOF and possibly the polarity.

Typical frequencies for a Circular LNB are 12.2-12.7 Ghz.

Typical frequencies for a Linear LNB are 11.7-12.2 GHz.

Typical frequencies for a Universal LNB are 10.7-12.75 GHz.

Typical frequencies for a Wide Band Circular LNB are 11.7-12.7GHz.

Typical LOF for a Circular LNB is 11250 MHz (11.250 GHz).

Typical LOF for a Linear LNB is 10750 MHz (10.750 Ghz).

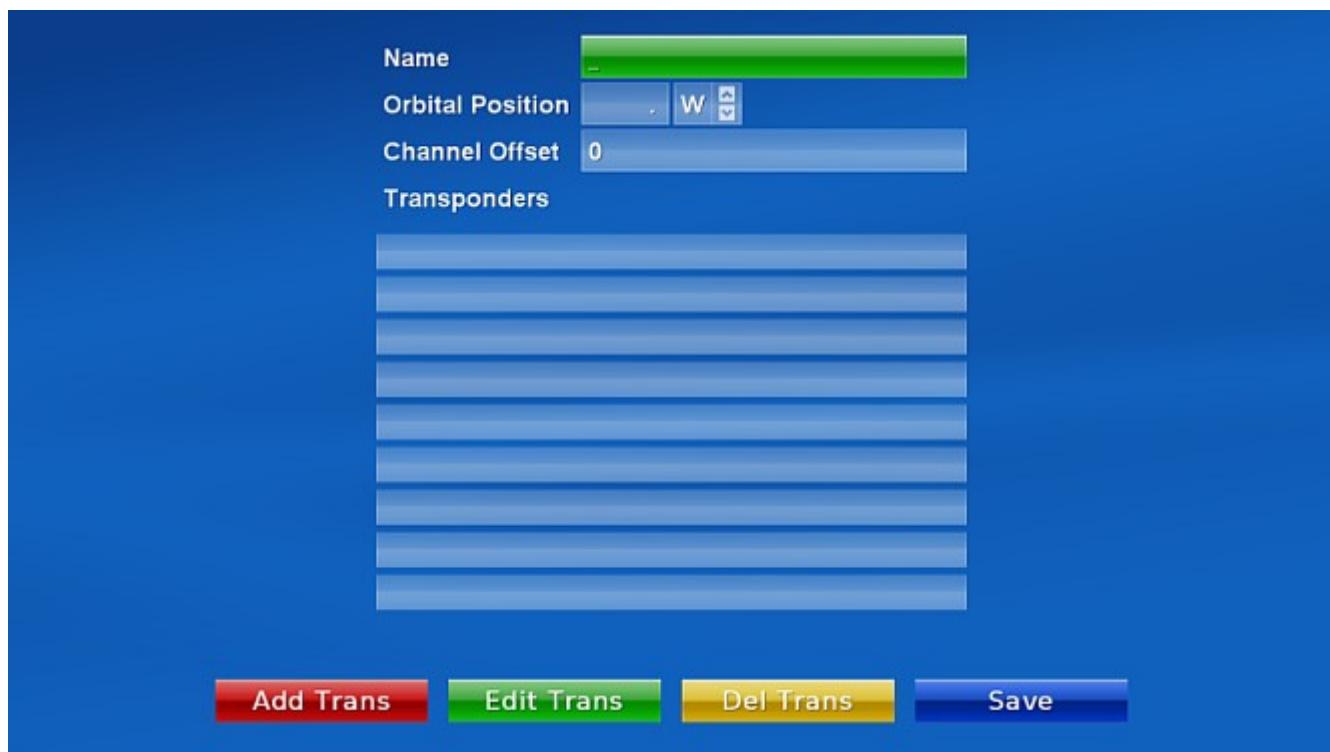
Typical LOF for Universal 1 LNB is 9750/10600 MHz (9.750/10.600 GHz).

Typical LOF for Universal 2 LNB is 9750/10750 MHz (9.750/10.750 GHz).

Typical LOF for Wide Band Circular LNB is 10750 (10.750 GHz).

For Dish™ equipment there are 2 types, Legacy or Dish Pro™/ Dish Pro Plus™. Legacy equipment will not have a DP or DPP logo on them. These LNBs function as standard Circular or Linear LNBs. Dish Pro or Dish Pro Plus LNBs with the corresponding logos will need the DP circular or DP Linear settings.

Adding a Satellite



The screenshot shows a user interface for adding a satellite. At the top, there are three input fields: 'Name' (with a green placeholder bar), 'Orbital Position' (with a dropdown menu showing 'W' and a small icon), and 'Channel Offset' (with a blue placeholder bar containing '0'). Below these is a section titled 'Transponders' which contains eight empty horizontal bars. At the bottom, there are four colored buttons: 'Add Trans' (red), 'Edit Trans' (green), 'Del Trans' (yellow), and 'Save' (blue).

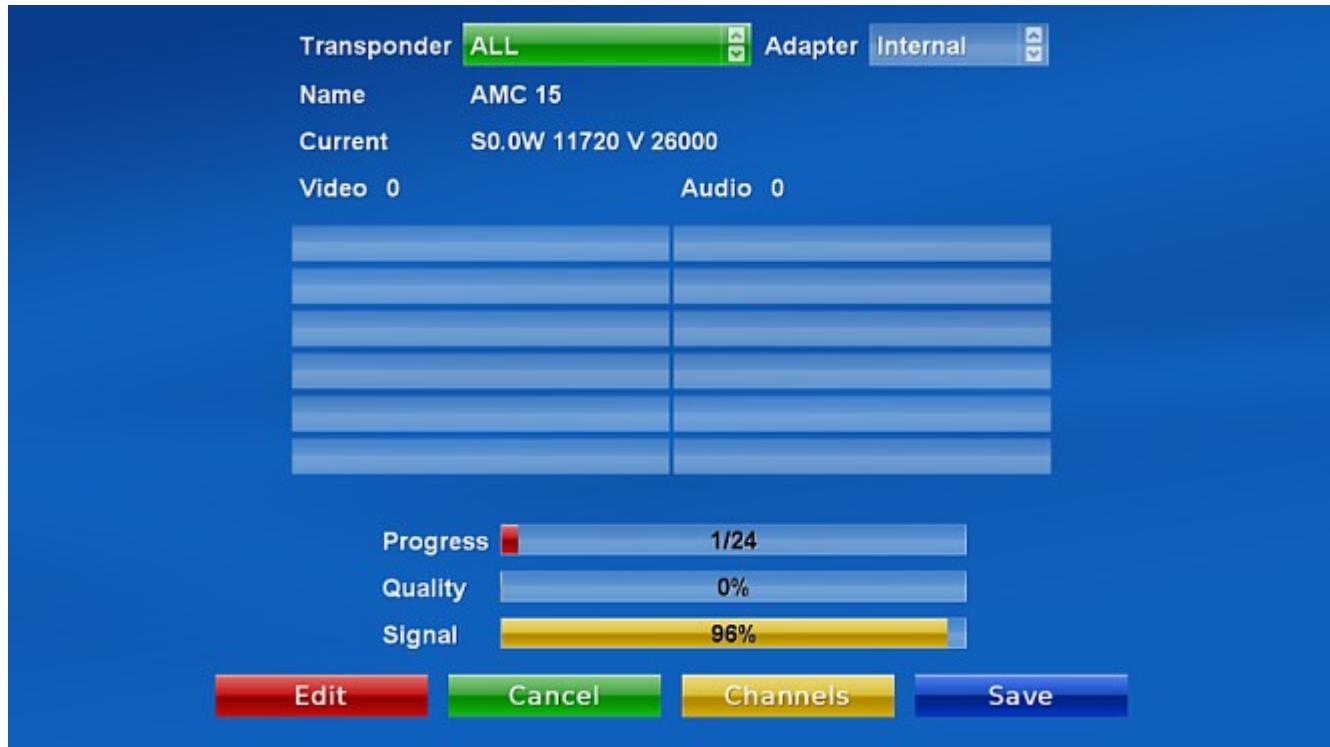
- Enter a satellite name.
- Enter the orbital position
- Enter a channel offset if needed for channel grouping.
- Use the red button to add transponders to the satellite
- The transponders may be edited on a satellite with the green button.
- Delete a transponder with the yellow button.
- When done press the blue button to save the changes.

NOTE: This is also the edit screen with the current data for the satellite filled in.

Satellite Scanning

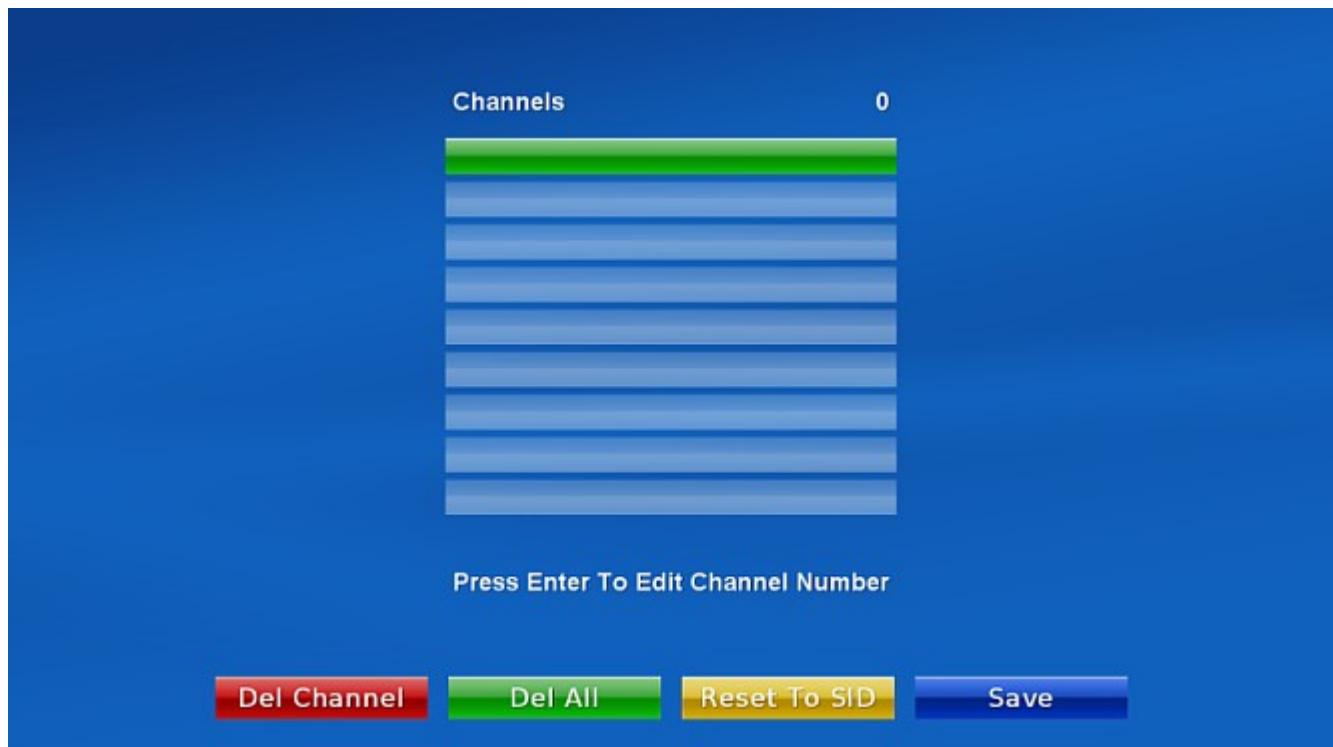
NOTE: If more than one provider is to be scanned, an offset can be specified per satellite to avoid channel number collision.

The Media Center numbers channels by the Service ID by default. Channel numbers can be edited once scanning is finished, but during scanning duplicate SIDs will overwrite any previously scanned channels with similar SIDs. This can present a problem if more than one provider's satellite(s) is(are) scanned. An offset of 10,000 is usually adequate to separate channels from multiple providers. For providers with multiple satellites, set all of their satellites to the same offset. To set an offset, use the "Edit" screen for the desired satellite(s). Set the offset and press the blue button to save.



- Once the offset is set, scanning for available channels can begin.
- Either select each satellite's scan button to scan the particular satellite individually or press the red button to scan all configured satellites at once.
- In the scanning screen, a signal meter and the scanned video and audio channels list is displayed.
- Select the internal or external adapter to be used for scanning.
(External refers to a connected Skywalker tuner)
- Press the green button to start the scan.
- Once a lock is achieved the satellite will be displayed beside Current.
(using AMC 15 as an example: S0.0W will change to 105.0W)
- Press the blue button to save the channel list after the scan is complete.

Editing Channels



- Once scanning is complete the channels found may be edited by pressing the yellow button in the satellite setup screen.
- Unwanted channels can be deleted or the channel numbers changed.
- The red button deletes the highlighted channel.
- The green button deletes all channels
- The enter button allows for assigning a new channel number to the highlighted channel. (Note: duplicate channel numbers are not allowed)
- Press the blue button to save the changes
- The channel ordering can be reverted back to "SID" ordering by pressing the yellow button..
- The changes will not take effect until the blue button is pressed to save the changes.

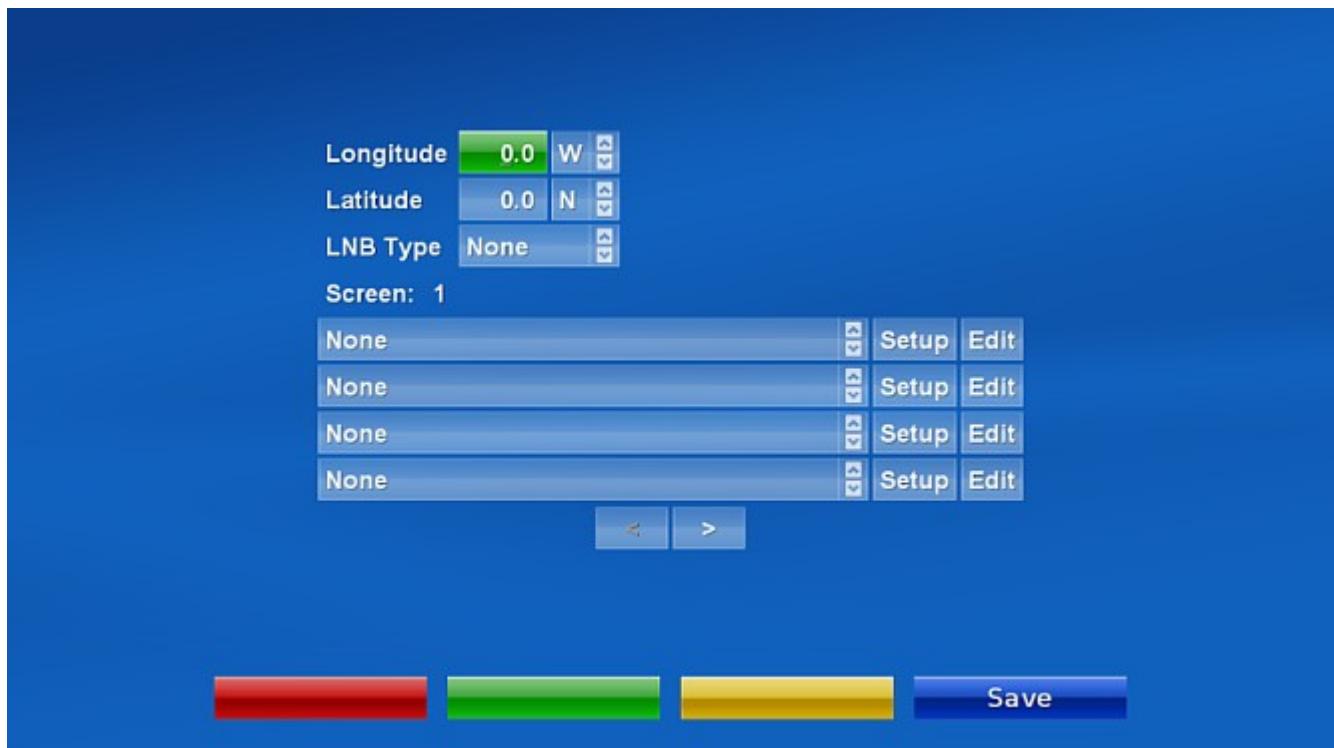
Motor support

The screenshot shows a software interface for managing satellite connections. At the top, there's a header with the word "Satellite". Below it, a table lists four ports (No. 1 to No. 4) with columns for "Port", "LNB", and "Name". The "LNB" column for port No. 1 is set to "Motor", while the others are "None". Each row has "Scan" and "Edit" buttons. At the bottom, there are four buttons: "Scan All" (red), "Add Sat" (green), "Channels" (yellow), and "Save" (blue).

Port	LNB	Name	Scan	Edit
No. 1	Motor	None		
No. 2	None	None		
No. 3	None	None		
No. 4	None	None		

Motor system works in either DISEQ C 1.2 mode or USALS mode.

- If you use a switch for a Quad type LNB set the switch to the type of switch.
- Select Motor for switch port
- Select Edit to set up LNB and motor configuration.



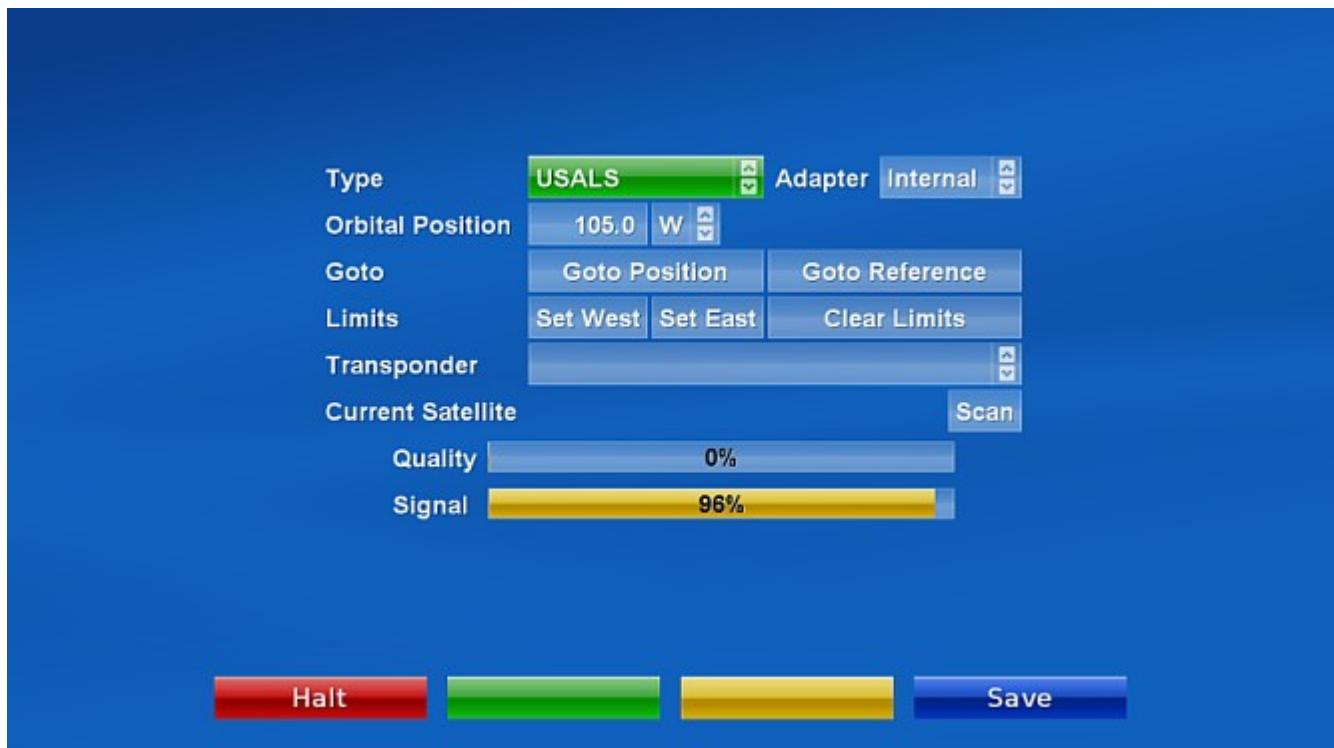
- Choose motor for switch port. Goto edit to set up LNB.
- If using a USALS capable motor, enter the Latitude and Longitude for your location.
- Choose the LNB type.
- Fill in the slots with the satellites that are to be set up.
- Bottom arrows move to additional screens to set up more satellites.
- Select Setup for the satellite to set up.



- **Adapter:** allows you to choose the internal adapter(s) or an external genpix adapter.
- **Type:** allows you to switch between diseqc 1.2 mode and USALS mode.

Diseqc 1.2 mode:

- **Position:** If the motor is already programmed you can enter the position if known. If not let it choose for you.
- **Move:** allows you to choose the number of steps for the motor to move when pressing East or West(Yellow or Green)
- **Goto Position:** tells the motor to move to the programmed position.
- **Goto Reference:** moves the motor to due south in most cases but may be far East limit depending on your particular motor.
- **Limits:** allow you to set a stop point in either direction in case there is an obstruction that will not allow full motor movement in both directions.
- **Clear Limits:** allows you to remove the limits.
- **Transponder:** allows you to choose the transponder that will be tuned to as you search for the satellite. Ensure that this transponder is available in your area.
- **Scan:** takes you to the scan screen to scan for channels once the satellite is found and programmed.
- **Save(Blue):** saves the position to the motor .
- **Halt(Red):** allows you to stop motor movement at any time.



USALS Mode:

- **Orbital Position:** Location in degrees of satellite to aim at. (Tip: if you have a USALS motor that is not set dead on tweaking this number can allow you to use the USALS function once you find how far off one satellite is you can change the rest by the difference to simplify setup. That will save having to do the Diseqc 1.2 hunt and store setup for each location.)
- **Goto Position:** tells the motor to move to the angular position specified by USALS.
- **Goto Reference:** moves the motor to due south in most cases but may be far East limit depending on your particular motor.
- **Limits:** allow you to set a stop point in either direction in case there is an obstruction that will not allow full motor movement in both directions.
- **Clear Limits:** allows you to remove the limits.
- **Transponder:** allows you to choose the transponder that will be tuned to as you search for the satellite. Ensure this transponder is available in your area.
- **Scan:** takes you to the scan screen to scan for channels once the satellite is found and programmed.
- **Save(Blue):** saves the ANGULAR POSITION.
- **Halt(Red):** allows you to stop motor movement at any time.

ATSC Scanning



ATSC is for Over The Air (OTA) digital broadcasts requiring an external antenna.

- Press the green button to start the scan.
- Press the yellow button to edit the channels
- Press the blue button to save the channel list after the scan is complete.

Edit ATSC

The screenshot shows a software interface titled "Edit ATSC". At the top, there are two input fields: "Name" containing "ATSC" and "Channel Offset" containing "0". Below these are the words "Transponders" followed by a list of eight entries: "57028 8VSB 000", "63028 8VSB 000", "69028 8VSB 000", "79028 8VSB 000", "85028 8VSB 000", "17702 8VSB 000", "18302 8VSB 000", and "18902 8VSB 000". There are also up and down arrow buttons for sorting. At the bottom are four colored buttons: red "Add Trans", green "Edit Trans", yellow "Del Trans", and blue "Save".

- The transponders may be edited by pressing the green button.
- Add a transponder with the red button and delete a transponder channel frequency with the yellow button.
- When done press the blue button to save the changes.

Cable Scanning



The ATSC card is also capable of tuning some digital cable channels providing they are unencrypted or "in the clear". There are some additional caveats. Your cable company must use a QAM256 modulation. Not all of them do. It is the most prevalent modulation but the cable companies are free to do as they see fit.

This does not mean all those analog channels you got on your "cable ready" TV will show up. They must be digital channels. Analog channels are not and will not be supported.

If your cable company uses QAM256 modulation for their digital channels you should get your local HD channel rebroadcasts if you are in the U.S. If you are in Canada you may get nothing. Canada does not have the "in the clear" requirement for local channels. They may all be encrypted in Canada.

On some systems you may get more than just the locals. It is completely dependent on your cable provider. In the U.S. some areas may get a few of the basic cable channels as well as local channels. In other areas you may get nothing more than locals. You may have to step through the scanned channels to find "in the clear" channels.

The QAM support is a side effect of the ATSC card. It is a novelty to play with and the bottom line is we have no idea what you may be able to receive. You may get nothing. You may get a lot. You may have to hunt for it.

Edit QAM

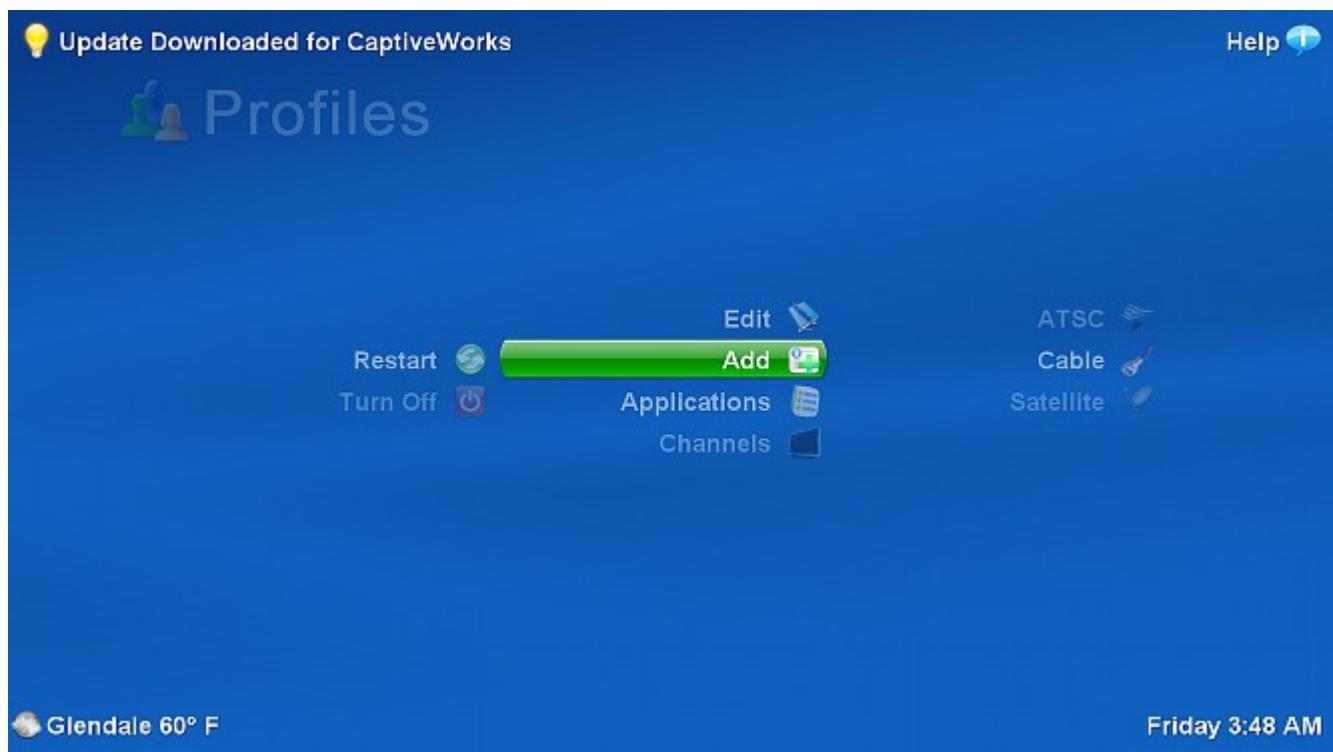
The screenshot shows a software interface titled "Edit QAM". At the top, there are two input fields: "Name" with the value "QAM" and "Channel Offset" with the value "0". Below these is a section titled "Transponders" containing a list of ten entries, each representing a transponder: "73753 QAM256 000", "55752 QAM256 000", "61753 QAM256 000", "67753 QAM256 000", "77753 QAM256 000", "83754 QAM256 000", "17575 QAM256 000", "18175 QAM256 000", and "18775 QAM256 000". Below the list are two small arrows pointing up and down, likely for sorting or navigating. At the bottom of the screen are four buttons: "Add Trans" (red), "Edit Trans" (green), "Del Trans" (yellow), and "Save" (blue).

- The transponders may be edited by pressing the green button.
- Add a transponder with the red button and delete a transponder with the yellow button.
- When done press the blue button to save the changes.

Profiles Menu

The Media Center uses a unique system for parental control. It's a profile system. Profiles can be created for different users assigning each profile a set of channels, sites, and applications. By default the system comes with 1 user and Admin. Admin is strictly for system setup and profile management. All system configuration shown above has been done under the Admin profile. The user profile is where the applications of the Media Center are used. Additional users can be setup for family members or special cases as needed. An example would be a children's profile containing channels and applications appropriate for children.

- Select "Profiles" from the Admin screen and press the enter button to display the profiles screen.



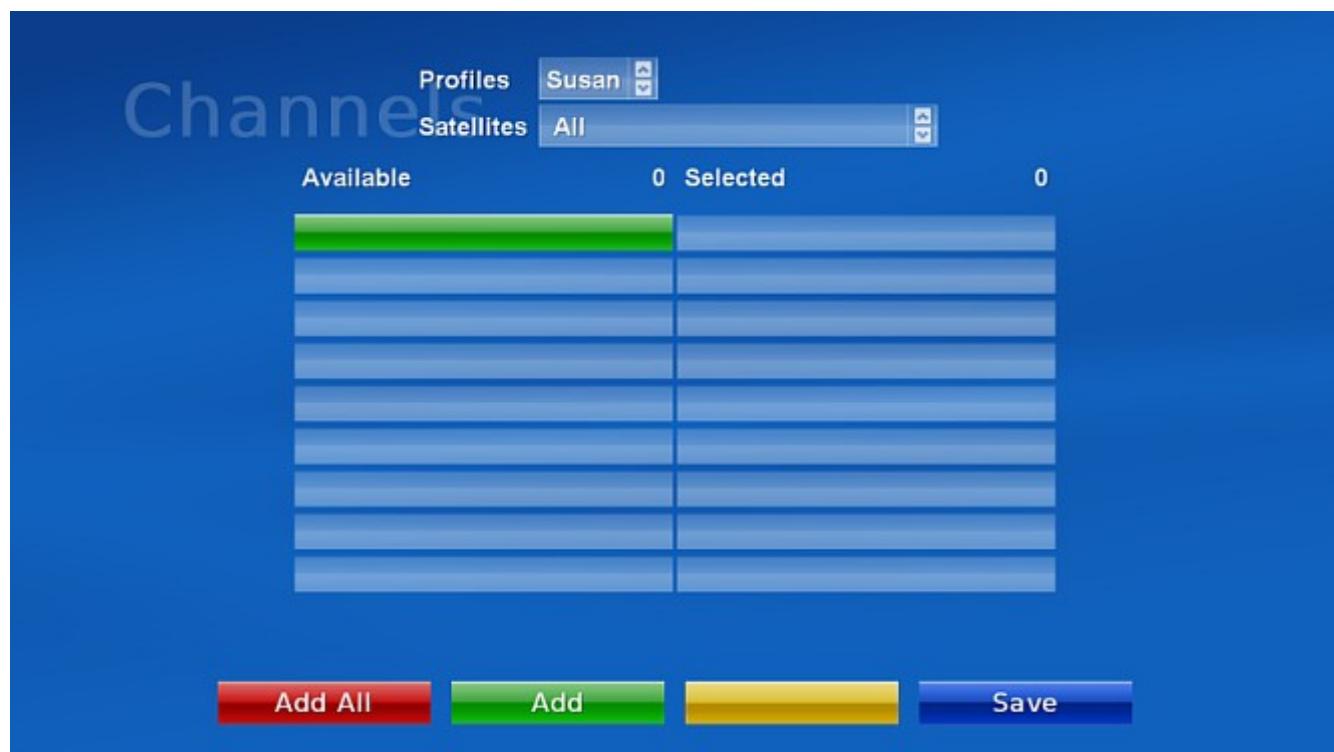
- Add is to Add a new profile.
- Edit is to change the name or PIN for a profile.
- Channels is to add or change satellite channels.
- IP Channels is to add or change IPTV channels.
- Applications is to add or change system applications.

Adding and Editing a profile



- **Name** – Enter a profile name. The name cannot contain spaces or non-alphanumeric symbols.
- **Pin** – Enter a pin if required. (Leaving it blank allows anyone to access the profile)
- **Confirm Exit** – Select yes or no to receive a confirmation message before leaving the profile. This is useful in situations where you may not want to accidentally leave the profile because you are recording, etc.
- **Auto Login** – Select yes or no to have this profile become a main profile that automatically logs in when the Media Center is turned on.
- **Auto Assign Channels** – Select yes or no to automatically assign channels.
- **Share On Network** – Select yes or no to automatically share the profile folders over the network for other desktop systems to access. This enables both sharing of the profile via Windows style networking and sharing of the profile via the internal web server. This means from the web browser of a networked PC type in the IP of your Media Center. (<http://192.168.x.x>) You may want to set a pin on the profile if you need to deny web-based access to others.
- **Generate Thumbnails** – Enable or disable thumbnailing of files for internal and external file system sources.
- **Generate Album Info** – Enable or disable downloading of album art of music files for internal and external file system sources.
- Choose an icon to display along with the name on the main screen.

Assigning Antenna Channels



- Use the up/down buttons to select a profile.
- Available channels will be displayed in the left available box.
- Channels that have been added will be in the right selected box.
- To move individual channels highlight a channel and press enter.
- The box to the left of the channel will display an "x" when selected.
- Once the desired channels have been selected, use the add or remove button to move the channels accordingly.
- All channels may be added or removed at once with the corresponding button.
- Press the blue button to save the changes.

NOTE: If satellite channels were scanned prior to creating a profile all channels will be added to the profile by default. If the profile is created prior to scanning, and auto assign channels was not selected, the channels have to be added manually. Also, Rescanning satellite channels will not add them automatically to the profiles if auto assign channels was not selected. The newly scanned channels have to be added manually.

Assigning Applications

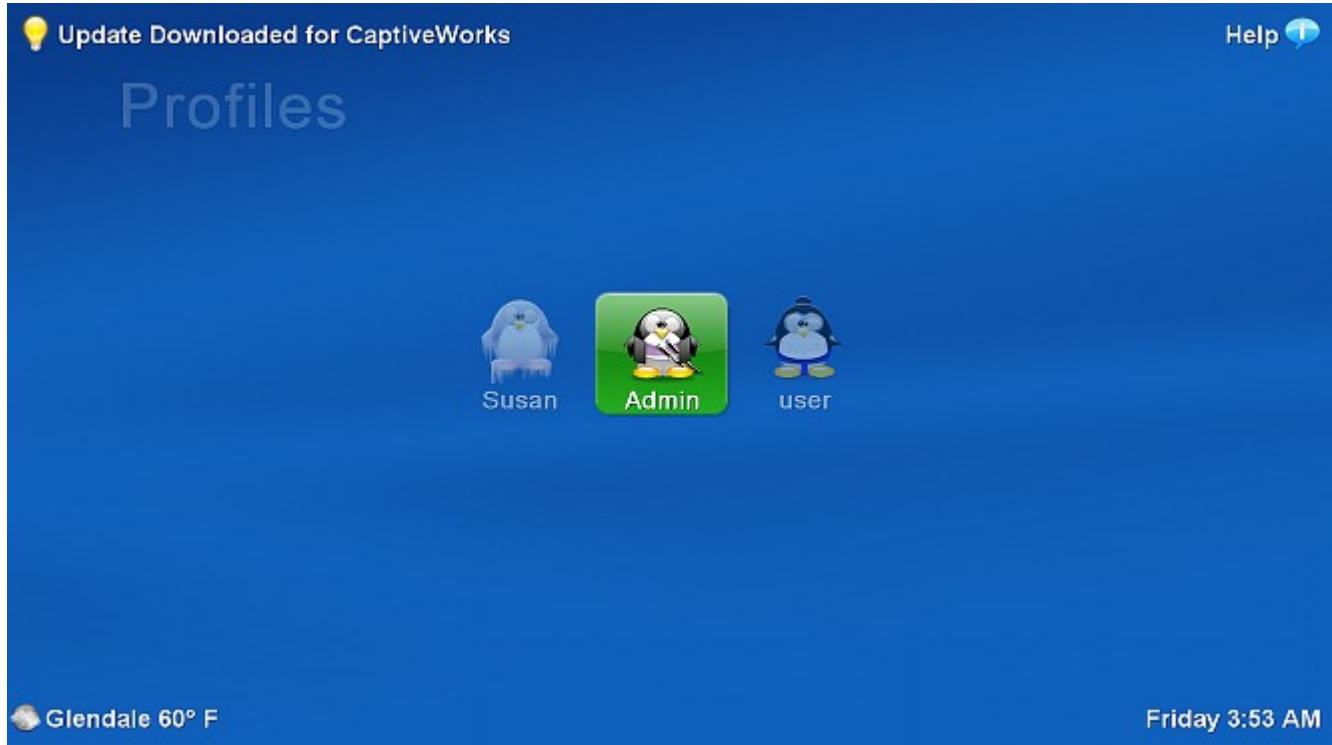


- Select profile with up/down buttons.
- Available applications will be displayed in the left available box.
- Applications that have been added will be in the right selected box.
- To move individual applications highlight an application and press enter. The box to the left of the application will display an "x" when selected.
- Once the desired applications have been selected, use the add or remove button to move the applications accordingly.
- All applications may be removed or added at once with the corresponding button.
- Press the blue button to save the changes.

NOTE: Some applications require an optional device be connected to function. Satellite TV requires a satellite dish aimed at the appropriate satellite(s). IPTV and Web both require a network Internet connection. Web will require a keyboard and mouse. Games and Roaster both require an optional hard drive to be installed. If these optional devices are not connected, these applications will not function.

System Operation

Profiles

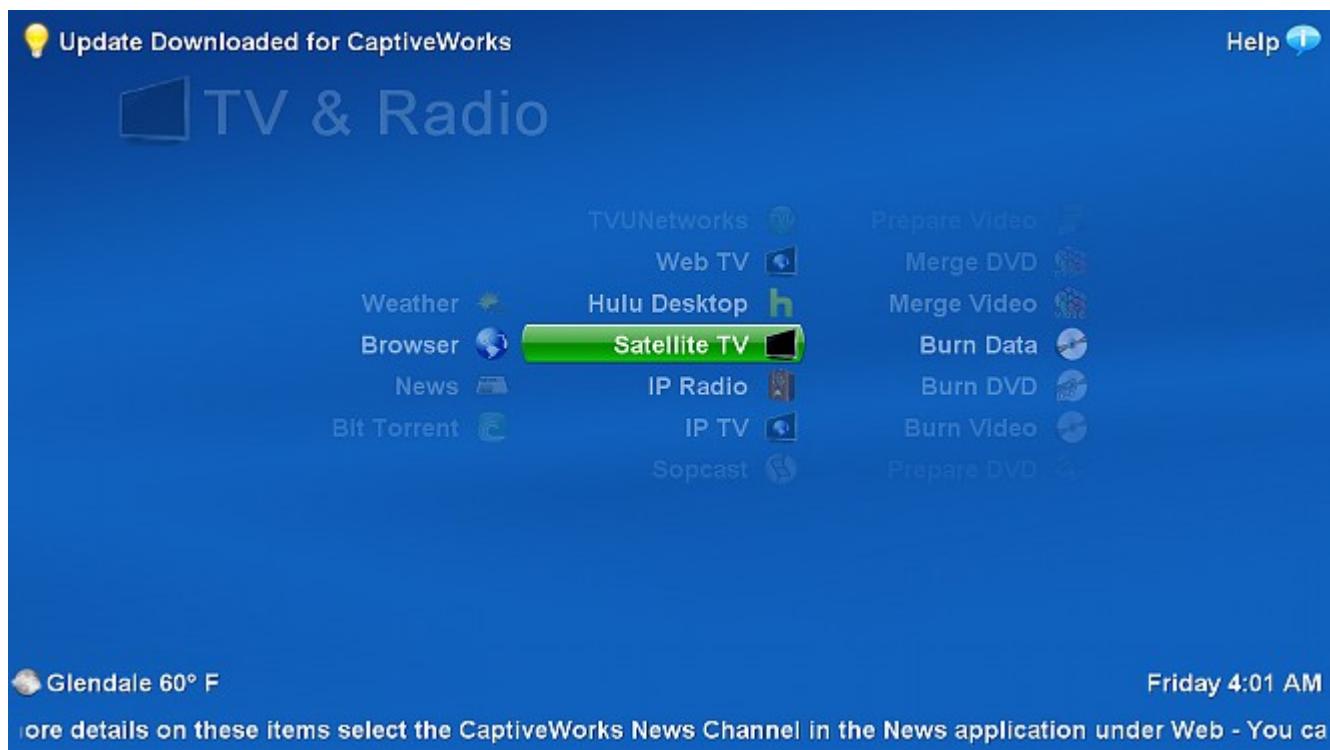


- The initial system start screen contains a list of all available profiles..
- Select the user profile and press the enter button.
- "user" is the default profile used in the example screens..

NOTE:

The profile name "user" is the display name specified when the user profile was created.
The following screens may differ depending on the applications assigned to the profile.
The following examples assume all applications are setup for use.

Profile Applications



TV & Radio (live content)

- Satellite TV (live-buffering satellite, atsc, cable)
- WebTV (live web feeds)
- Hulu Desktop
- TVUNetworks
- Sopcast
- IP TV
- IP Radio

Media

- Video
- DVD
- VCD
- CD
- Music
- Pictures

Web

- Browser
- Bit Torrent
- News
- Weather

Roaster

- Prepare DVD
- Prepare Video
- Merge DVD
- Merge Video
- Burn DVD
- Burn Video
- Burn Data

Extras

- File Manager
- CD Ripper
- Games

TV & Radio

Satellite TV

Satellite, ATSC, and Digital Cable TV viewing application

Remote Control Keys For TV Viewer

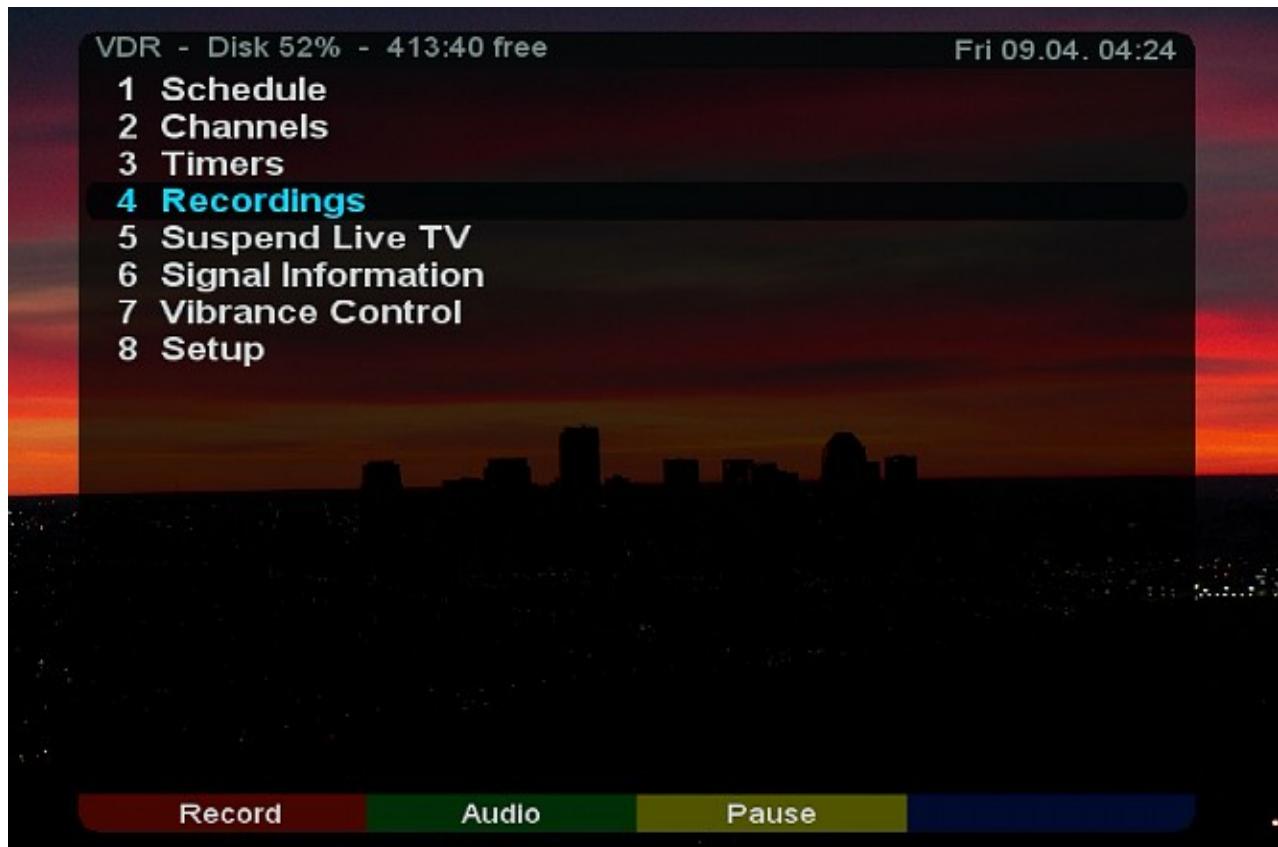
The following remote control keys are used to control the TV operation.

To keep the number of different keys as small as possible, several keys have different functions in the various modes:

BUTTONS	MODES						
	Normal	Menu	Channels	Timers	Edit/New	Recordings	Replay
App Exit	Exit	-	-	-	-	-	-
Rec	Instant Record	-	-	-	-	-	
Play	Play	-	-	-	-	-	Time line
Timer	Timer menu	-	-	-	-	-	-
Rew	Fast-Rewind	-	-	-	-	-	-
Pause	Pause	-	-	-	-	-	-
FF	Fast-Forward	-	-	-	-	-	-
Prev	Skip Back	-	-	-	-	-	-
Stop	Stop	-	-	-	-	-	-
Next	Skip Forward	-	-	-	-	-	-
Up	Ch up	Csr up	Csr up	Csr up	Csr up	Csr up	Play
Down	Ch down	Csr down	Csr down	Csr down	Csr down	Csr down	Pause
Left	Channel bar	Page up	Page up	Page up	Decrement	Page up	Search back
Right	Channel bar	Page down	Page down	Page down	Increment	Page down	Search forward
Enter	Channel menu	Select	Switch	Edit	Accept	Play	Progress Display
Back		Menu off	VDR menu	VDR menu	Discard	VDR menu	Recordings menu
Red	Recordings	Record	Edit	On/Off	ABC/abc	Play/Commands	Jump
Green	Zoom out	Audio	New	New	Ins/Ovr	Rewind	Zoom out
Yellow	Zoom in	Pause	Favorite	Delete	Delete	Edit	Zoom in
Blue	Attenuate	-	Move	Info	-	Info	Attenuate
EPG	EPG	-	-	-	-	-	-
Vol+	Volume up	-	-	-	-	-	-
Vol-	Volume down	-	-	-	-	-	-
CH+	Channel up	-	-	-	-	-	-
CH-	Channel down	-	-	-	-	-	-
i	Program info	-	-	-	-	-	-
0-9	Ch Select	-	Sort(2)	Day(3)	Numeric inp	Exec cmd(1)	Editing
All	What's on Now	-	-	-	-	-	-
TV/Rad	RadioChannels	-	-	-	-	-	-
Sat	SatChannels	-	-	-	-	-	-
Search	EPG search	-	-	-	-	-	-
Menu	Menu on	Menu off	Menu off	Menu off	Menu off	Menu off	Menu off
Recordings	Recordings	-	-	-	-	-	-
Sched	Schedule	-	-	-	-	-	-
History	Zap History	-	-	-	-	-	-
Mute	Mute	-	-	-	-	-	-
Audio	Audio menu	-	-	-	-	-	-
Caption	Caption on/off	-	-	-	-	-	-

1. See "Processing Recordings" below.
2. In the "Channels" menu the '0' key switches the sort mode through "by number", "by name" and "by favorite". Other numeric input positions the cursor to the channel with the number entered so far. If there is no channel with that number, nothing happens. While entering a channel number, the '0' key will be treated as part of that number, not as a sort mode toggle. If no numeric key has been pressed for more than one second, the number is reset and '0' functions as sort mode toggle again.
3. In the "Timers" menu, when on the "Day" item, the '0' key toggles between a single shot and a repeating timer. If "Day" indicates a repeating timer, the keys '1'...'7' can be used to toggle the individual days ('1' is Monday).
 - In a numerical input field the keys 0..9 are used to enter the data, and the Left key can be used to delete the last entered digit.
 - In a text input field (e.g. the file name of a recording) the characters can be entered by pressing the numeric keys, the same way as on a cell phone keypad.

Navigating through the On Screen Menus



- The "VDR" menu can be called up with the Menu button of the remote control.
- The Up and Down buttons are used to select a specific item.
- The Left and Right buttons can be used to change options, and the numeric buttons allow direct input of numeric data.
- The Enter button confirms any changes.
(or switches to a channel in the "Channels" menu)
- The Back button goes back one level in the menu structure, discarding any changes that might have been made in the current menu.
- In the "Timers" menu, the current timer can be enabled or disabled with the Red button.
- The Red button toggles through the "enabled" and "disabled" states, and for repeating timers that are currently recording also a state that ends this recording prematurely and sets the "First day" date so that it will record again the next time the timer hits.
- Pressing the Enter button here opens the "Edit timer" menu.
- Textual options, like channel names or recording file names, can be edited by pressing the Right button (which puts brackets around the current character as in "[R]TL"), selecting the desired character position with Left and Right, and changing the character with the Up and Down buttons.
- Enter then confirms the changes.
- The Red button toggles between upper and lowercase characters.
- The Green button switches between insert and overwrite mode.
- The Yellow button deletes the current character (or the one to the right of the cursor in insert mode).

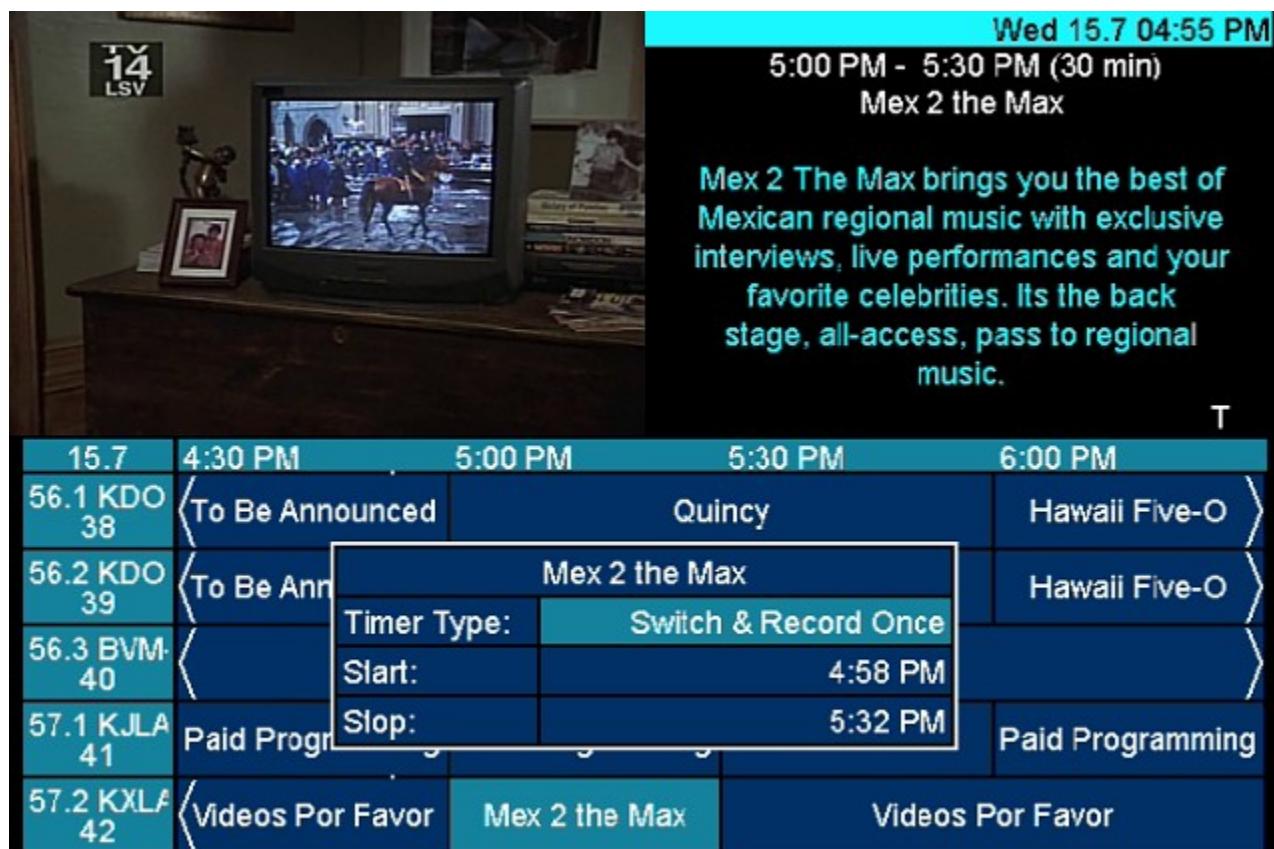
NOTE:

The Red, Green, Yellow and Blue buttons have special functions in various menus and are listed at the bottom of the on-screen-display.

At any point in the menu system, pressing the "Menu" button again will immediately leave the menu system (discarding any pending changes).

The Grid Program Guide

- The EPG button will display a grid style "Electronic Program Guide".
- Up, Down, Left and Right will move the cursor through the guide.
- The Green (Page Up) and Yellow (Page Down) buttons move through the guide one page at a time.
- The program information in the upper portion of the screen will give a program description for the currently highlighted program.
- Pressing the Enter button will change to the channel currently highlighted and will also close the guide.
- Pressing the Red button will change to the channel currently highlighted, but keep the guide active.
- Pressing the Enter button on a future program will pop up a timer creation box.



- The default timer is a one time switch and record timer. Switch and Record will switch to the selected channel at the designated start time and begin recording.

This highlighted default upper cell of the timer window can be changed by using the right and left arrow keys.

News	
Timer Type:	Switch Once
Start:	8:58 PM
Stop:	9:37 PM

- The Timer Type may be set to a switch timer. Switch Once will simply switch to the selected channel at the designated start time without recording.

News	
Timer Type:	Record Once
Start:	8:58 PM
Stop:	9:37 PM

- The Timer Type may also be set to Record Once for a one time recording.
- Further types of timers also include the ability to be set to record the same time on the same day each week, the same time every day of the weekday or the same time every Saturday and Sunday.
- The start and stop time of the timer may be altered. The Left and Right buttons will add or subtract one minute from the start or stop time depending on the cell that is highlighted. Note that the Start and Stop time are offset by the Margin Start and Margin Stop parameters in order to make sure the entire program is recorded in case it doesn't exactly adhere to its published start/stop times. Of course, no guarantee can be given that the default margin values will be sufficient, so in case this recording is really important, an extra margin can be added.
- Pressing the blue button will display the channels by source. Pressing again will toggle to the next source. (ie. Satellite1, Satellite2, ATSC, etc.)
- Pressing the 0 button will sort the channels by number or by favorite.
- The Back button will exit back to the current program without changing the channel.

The "Schedule" Menu

- The "Schedule" menu presents a list style "Electronic Program Guide" (EPG).
- Select "Schedule" from the "VDR" menu to get a list of all upcoming broadcasts on the current channel.
- Up and Down can be used to scroll through this list, and pressing Enter displays detailed information about the selected program. Pressing Enter again (or pressing Exit) returns back into the "Schedule" menu.
- From the "Schedule" menu, the Green button opens the "What's on now?" menu, which displays all programs that are currently running on all channels that have EPG.
- The Yellow button opens the "What's on next?" menu, which lists all programs that will start next on all channels.
- Inside the "What's on now/next?" menus the Green button toggles between the "Now" and "Next" display, and the "Yellow" button displays the "Schedule" menu of the current channel in the list.
- The Red button allows programming a timer to record the selected program instantly. After pressing this button, the current event will be marked with 'T', and the function of the Red button will change from "Record" to "Timer".
- Pressing Red on an event marked with 'T' will open the "Edit timer" menu for this timer, where one can make any desired modifications. Note that the Start and Stop time are offset by 2 minutes in order to make sure the entire program is recorded in case it doesn't exactly adhere to its published start/stop times. Of course, no guarantee can be given that the default 2 minutes will be sufficient, extra margin can be added if this recording is extremely important.
- VPS recordings will use the exact Start (or VPS) and Stop times as given in the event. If a timer is newly created from within the "Schedule" menu, and its event is already running or has its start time within the next two minutes, it goes directly into the "Edit timer" menu in order to allow the user to make further changes to timer parameters before the actual recording starts.
- The Blue button can be pressed to switch to the channel with the selected program.
- Pressing 0 in the "Schedule" menu rotates through displaying "This event on this channel", "This event on all channels" and "All events on all channels". This can be used to find reruns of a given show, or the episodes of a series. Note that if there are many channels in the channels list, displaying the "All events on all channels" page may take a while.

Selecting a Channel

There are five ways to select a channel:

1. With no On Screen Menu displayed press the Up or Down button to switch to the next higher or lower channel.
2. Press the EPG button to bring up the grid program guide and browse through the guide with the Up and Down or Yellow(Page Down) and Red (Page Up) buttons. Switch to the selected channel with the ?Enter? button.
3. Press the Menu button to bring up the On Screen Menu, select "Channels" and browse through the list with the Up and Down key; to switch to the selected channel press Enter.
4. Directly type in the channel number with the numeric keys ('0'..'9'); if no key is pressed for about 5 seconds, the digits collected so far will define the channel number.
5. Press the All button to bring up "What's on now"and "Next" menu. Highlight the desired channel and press the Blue button to "Switch" to the channel..
 - Pressing the 0 button in normal viewing mode toggles between the current and the previous channel. A channel is considered "previous" if it has been selected for at least 3 seconds.
 - After switching to a different channel the channel number and name, as well as the current time are displayed in the OSD. If available, the 'current/next' information will be displayed below this line.
 - This display automatically goes away after about five seconds, or if any key is pressed.

Favorites

- Press the Menu button to bring up the On Screen Menu, select "Channels" and browse through the list with the Up and Down key.
- Highlight the channel you wish to add to your favorites list and press the yellow button marked favorite. An icon will appear beside the channel indicating it is now a favorite.
- Pressing the yellow favorite button again on the highlighted channel will remove it from the favorites list.

NOTE: Once you have a favorites list you can sort your channels by favorite by pressing the 0 button at the channels screen as well as within the EPG.

Selecting audio tracks

- If the current channel or recording provides different audio tracks (for different languages or Dolby Digital), the Audio button can be pressed to bring up the "Audio" menu.
- Within this menu, the Up and Down keys can be used to switch between the audio tracks.
- The Left and Right keys can be used to switch between "mono left", "stereo" and "mono right" for channels that broadcast different audio tracks in the left and right stereo channels.
- The Enter key explicitly switches to the selected track (in case the device for some reason doesn't play it) and closes the "Audio" menu.
- The "Audio" menu will automatically disappear after 5 seconds of user inactivity, or if any key other than the ones described above is pressed.
- Once a Dolby Digital track has been selected on any channel, further channel switches will first search for a Dolby Digital track of one of the preferred audio languages. If no such track can be found, a normal audio track will be selected.
- Note that this only works if the broadcasters use actual language codes in their PID data, not things like "dd" or "2ch".

Instant Recording

- Recording can be started in the current channel by pressing the Red button in the "VDR" menu or pressing the Record button.
- This will create a timer event named "@channelname" that starts at the current time and by default records for 3 hours.
- If the recording time needs to be modified, the timer must be edited.
- Stop instant recording by pressing the Menu (M) button and selecting "Stop Recording", or by disabling the timer.
- The default priority, lifetime and recording time can be defined in the "Setup/Recording" menu.
- As the live-video is continuously recorded, it is possible to get the just seen scene into a normal recording.
- A new timer can be created. If the start time is in the past, then the already seen part of the recording will be added.
- Or rewind to the start point and start an instant recording (by pressing the rec-key or menu -> red)

Pausing live video

- If the live program being watched needs to be paused, press Menu/Yellow or Pause on the remote control.
- Replay will be put into "pause" mode allowing the viewer to attend to other events while the program is paused.
- Once ready to continue viewing, press the Up or Play button to watch the current channel in time shift mode, from the point where it was paused.
- It is also possible to rewind a scene to get an instant replay. Press the Rewind (<<) button to start rewinding. Press Play to resume playback.
- Play resumes normal replay from any "pause", "forward" or "backward" mode.
- Fast Forward/Rewind (<< >>) runs playback forward or backward at a higher speed; press again to increase the speed. Press Play to resume normal speed. If in Pause mode, runs forward or backward at a slower speed, press Pause to return to pause mode.
- Press the stop button to return to viewing in realtime.

Replaying a Recording

- All recordings are listed in the "Recordings" menu.
- Browse through the list with the Up and Down button and press Enter (or the Red button) to start playback.
- New recordings are marked with an '!'.
- VDR adds the "Episode name" (which is usually the name of the episode in case of a series) to the recording's name.
- The "Recordings" menu then displays all recordings of a repeating timer in chronological order, since these are usually the individual episodes of a series, which may be viewed in the order in which they were broadcast.
- Pressing '0' will toggle the sort mode.
- Playback can be stopped via the "VDR" menu by selecting "Stop replaying", or by pressing the Stop button outside the menu. A previously stopped playback session can be resumed by simply restarting the recording.
- Press the "Green" button in the recordings menu to rewind a recording to start at the beginning.

Replay Control

- The following keys have the listed meaning in Replay mode:

Up	Resumes normal replay from any "pause", "forward" or "backward" mode.
Down	Halts playback at the current position. Press again to continue playback.
Blue	Attenuates the volume. This function is similar to mute, but instead of setting the volume to zero it lowers the volume a set amount.
Left/Right	Runs playback forward or backward at a higher speed; press again to increase the speed. Press Up to resume normal speed. If in Pause mode, runs forward or backward at a slower speed, press Pause to return to pause mode.
Red	Jump to a specific location. Enter the time to jump to and then press "Left" or "Right" to jump relative to the current position, "Up" to jump to an absolute position, and "Down" to jump and pause at an absolute position.
Green/ Yellow	Enters the Zoom mode. In this mode Red resets the size to 1:1. Green zooms out, Yellow zooms in, Blue sets a quick-zoom. 1,2,3,4,5 toggles through different aspect ratios. This mode can be exited with the Back key.
Enter	Brings up the replay progress display, which shows the date, time and title of the recording, a progress bar and the current and total time of the recording. Press Enter again to turn off the progress display.
Back	Stops replaying and brings up the "Recordings" menu. This can be used to easily delete a recording after watching it, or to switch to a different recording.

Editing Recordings

- While in Replay mode, the following keys can be used to manipulate editing marks:
 - 0 Toggles an editing mark. If the mark indicator shows a red triangle, the current mark is deleted. Otherwise a new mark is set at the current position.
 - 4, 6 Move an editing mark back and forward. First, jump to an editing mark for this to work.
 - 7, 9 Jump back and forward between editing marks. Replay goes into still mode after jumping to a mark.
 - 8 Positions replay at a point 3 seconds before the current or next "start" mark and starts replay.
 - 2 Start the actual cutting process.
- Editing marks are represented by black, vertical lines in the progress display.
- A small black triangle at the top of the mark means that this is a "start" mark, and a triangle at the bottom means that this is an "end" mark.
- The cutting process will save all video data between "start" and "end" marks into a new file (the original recording remains untouched).
- The new file will have the same name as the original recording, preceded with a '%' character (imagine the '%' somehow looking like a pair of scissors).
- Red bars in the progress display indicate which video sequences will be saved by the cutting process.
- The video sequences to be saved by the cutting process are determined by an "even/odd" algorithm. This means that every odd numbered editing mark (i.e. 1, 3, 5,...) represents a "start" mark, while every even numbered mark (2, 4, 6,...) is an "end" mark.
- Inserting or toggling a mark on or off automatically adjusts the sequence to the right side of that mark.
- Use the keys described under "Replay Control" to position to, e.g., the beginning and end of commercial breaks and press the '0' key to set the necessary editing marks.
- After that use the '7' and '9' keys to jump to each mark and maybe use the '4' and '6' keys to fine tune them.
- Once all marks are in place, press '2' to start the actual cutting process, which will run as a background process.
- When replaying the edited version of the recording use the '8' key to jump to a point just before the next cut and have a look at the resulting sequence.
- Currently editing marks can only be set at I-frames, which typically is every 12th frame. So editing can be done with a resolution of roughly half a second.
- A "start" mark marks the first frame of a resulting video sequence, and an "end" mark marks the last frame of that sequence.
- An edited recording (indicated by the '%' character) will never be deleted automatically in case the disk runs full (no matter what "lifetime" it has).

Quick Editing Mini-Howto

STEPS FOR EDITING RECORDINGS:

Go to recordings

Play the recording

Skip ahead to when the show starts

Hit pause

Hit 0 to create a mark

If you want to move the mark a bit use 4 or 6 depending on the direction

Hit play

Skip ahead to the commercial (or end of the show if it's commercial free)

Hit pause

Hit zero to make another mark

If you want to move the mark a bit use 4 or 6 depending on the direction

When you have reached the end of the show and are happy with the mark locations hit 2 to begin the process of cutting and combining the recording

Hitting 2 will take whatever data is between your first and second

mark.. your third and fourth mark .. and so on and use that data as the new recording file.

TO RE-EDIT RECORDINGS:

Using 7 and 9 enable you to jump from mark to mark.

This is useful when wanting to move the marks slightly.

Programming the Timer

Use the "Timer" menu to maintain the list of timer controlled recordings. The parameters in the "Edit timer" menu have the following meanings:

- **Active:** Defines whether the timer will be processed (set it to 'no' to temporarily disable a timer).
- **Channel:** The channel to be recorded (as defined in the "Channels" list). Any changes made in the "Channels" list (like renaming or reordering channels) will be automatically reflected in the timers settings.
- **Day:** The day on which this timer shall start. This can be a date (like 2005-03-19), which allows programming a "single shot" timer that hits once and is deleted after it ends.
 - Another option here are "repeating timers" which are defined by listing the days of the week on which they shall record. For example, a timer that shall record every Monday and Wednesday would have a Day setting of "M-W---".
 - The '0' key toggles between a single shot and a repeating timer.
 - If "Day" indicates a repeating timer, the keys '1'...'7' can be used to toggle the individual days ('1' is Monday).
 - Switch to a set of predefined repeating timer settings by pressing the "Left" key when the day is the present day.
 - To return to the single shot mode just press "Right" until a date is displayed.
- **Start:** The start time of the timer in hh:mm as 24 hour ("military") time.
- **Stop:** The stop time of the timer.
- **VPS:** Defines whether the timer shall use VPS (if available).
 - If this option is set to 'yes', the start time must exactly match the program's VPS time, otherwise nothing will be recorded.
 - If VPS is used, the stop time has no real meaning. However, it must be different than the start time, and should correspond to the actual stop time of the program, just in case there is no real VPS data available at the time of recording, so VDR has to fall back to normal timer recording.

- **Action:** Defines the action the timer will invoke.
 - Switch will switch to the channel when the timer becomes active. This is useful when the user want to watch an upcoming program yet does not want to record it.
 - Switch & Record will switch and record when the timer becomes active.
 - Record will record the channel once the timer becomes active.
This option is most used with a dual tuner system when the user want to record a show in the background, but continue to watch with their other tuner. Another use of a record timer is when you would like to have the timer include the current livebuffer. An example of this would be the user decides after watching ½ of a show that it would be nice to record a copy of it. If they set a timer for the beginning of when the show started and change the Action to Record the system will automatically edit and add the show from the livebuffer to the recording.
- **Priority:** The Priority (0..99) is used to decide which timer shall be started in case there are two or more timers with the exact same start time.
 - The first timer in the list with the highest Priority will be used.
 - This value is also stored with the recording and is later used to decide which recording to remove from disk in order to free space for a new recording.
 - If the disk is full and a new recording needs more space, an existing recording with the lowest Priority (and which has exceeded its guaranteed Lifetime) will be removed.
 - A timer with a higher priority will interrupt the timer with the lowest priority in order to start recording.
- **Lifetime:** The number of days (0..99) a recording made through this timer is guaranteed to remain on disk before it is automatically removed to free up space for a new recording.
 - Note that setting this parameter to very high values for all recordings may soon fill up the entire disk and cause new recordings to fail due to low disk space.
 - The special value 99 means that this recording will live "forever", and a value of 0 means that this recording can be deleted any time if a recording with a higher priority needs disk space.

- **File:** The name under which a recording created through this timer will be stored on disk (the actual name will also contain the date and time, so it is possible to have a "repeating timer" store all its recordings under the same name; they will be distinguishable by their date and time).
 - If the file name contains the special character '~', the recording will be stored in a hierarchical directory structure.
 - For instance, a file name of "Sci-Fi~Star Trek~Voyager" will result in a directory structure "/video/Sci-Fi/Star_Trek/Voyager"
 - The '~' character has been chosen for this since the file system's directory delimiter '/' may be part of a regular program name.
 - Repeating timers create recordings that contain the 'Episode name' information from the EPG data in their file name.
 - Typically (on tv stations that care about their viewers) this contains the episode title of a series. The episode name is appended to the timer's file name, separated by a '~' character, so that it results in all recordings of this timer being collected in a common subdirectory.
 - If this field is left blank, the channel name will be used to form the name of the recording.
- **Path:** The folder name(s) under which the recording created through this timer will be stored on disk.
 - Press the right arrow to begin editing the Path field.
 - Press either the red up button or green down button to select an existing folder.
 - Press either the yellow previous button or the blue next button to cycle through the available folders.
 - Once the folder path has been achieved press the enter button to stop the editing mode.
 - Press the Enter button again to accept the changes.
- First day: The date of the first day when this timer shall start recording (only available for repeating timers).

NOTE: A timer can also be programmed by pressing the "Red" button on the "Schedule", "Now", "Next" or "Event" menus.

VDR Live (SatelliteTV via a PC's web browser)



- For those that have an interest in utilizing a networked PC to control the Satellite TV application they can access it via the IP address of the CW-LMC (example: <http://192.168.1.101:8008>)
- It is also possible to view the video stream and recordings from a networked PC utilizing this method.

WebTV

The WebTV viewer application is for viewing streaming video from the Internet. The WebTV function requires a network connection with Internet access. Ensure that network setup has been completed prior to attempting to view WebTV feeds.



- Highlight a Channel and press the blue button to view the list of WebTV feed categories under the channel.
- Highlight a WebTV feed category and press play, enter or the blue view button to retrieve the feed list.
- Scroll through the feed list and highlight the appropriate feed then press play, enter or the blue view button.
- Pressing the red button refreshes the list.
- Pressing the App Exit button exits the viewing application.

TVUNetworks

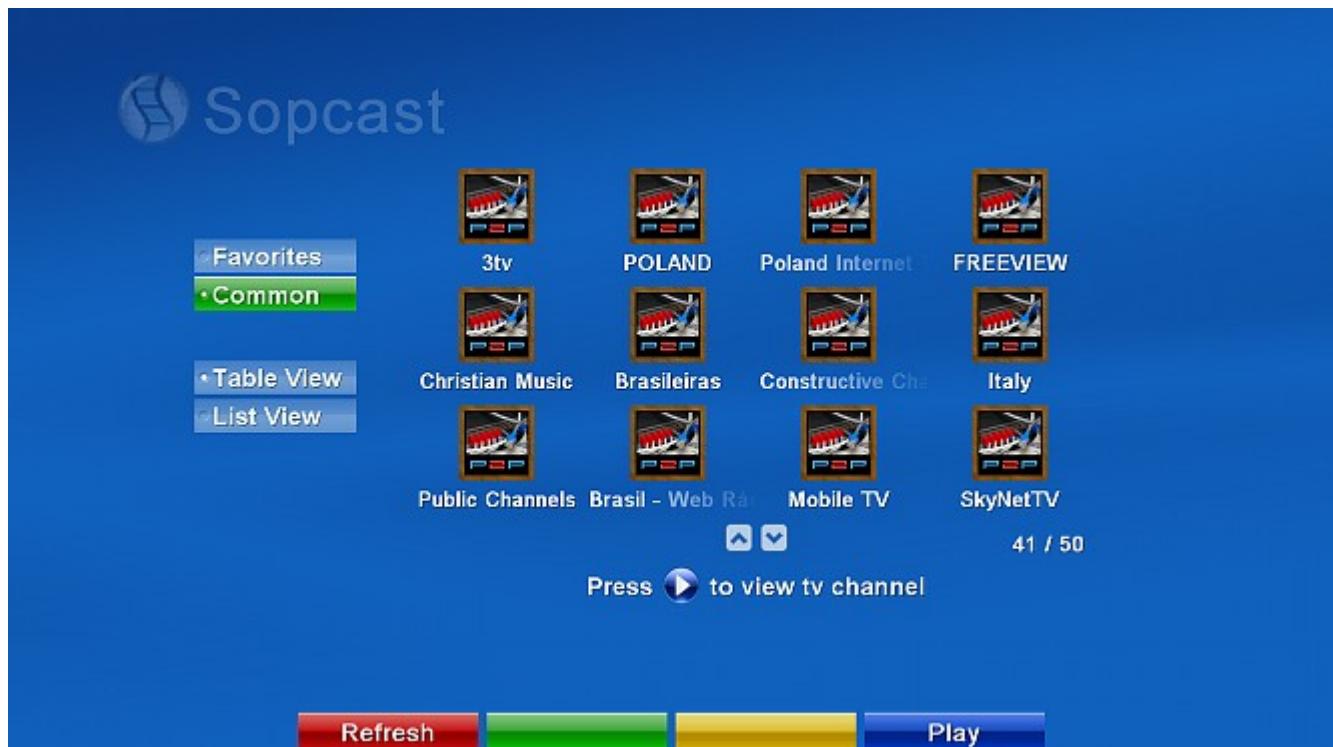
The TVUNetworks viewer application is for viewing streaming video from the Internet. The TVUNetworks function requires a network connection with Internet access. Ensure that network setup has been completed prior to attempting to view TVUNetworks channels.



- Highlight a TVUNetworks category and press the blue button to view the list of channels available under that category.
- Scroll through the channel list and highlight the appropriate channel then press play, enter or the blue view button.
- Pressing the red button refreshes the list.
- You can add channels to a Favorites list by highlighting a channel and pressing the green button.
 - Highlighting the Favorites button on the left and pressing enter will bring up your favorites list.
 - While in your favorites list you can add a channel manually by pressing the green Add button.
 - Press the red button to delete a highlighted favorite.
- Pressing the App Exit button exits the viewing application.

Sopcast

The Sopcast viewer application is for viewing streaming video from the Internet. The Sopcast function requires a network connection with Internet access. Ensure that network setup has been completed prior to attempting to view Sopcast channels.



- Highlight a Sopcast category and press the blue button to view the list of channels available under that category.
- Scroll through the channel list and highlight the appropriate channel then press play, enter or the blue view button.
- Pressing the red button refreshes the list.
- You can add channels to a Favorites list by highlighting a channel and pressing the green button.
 - Highlighting the Favorites button on the left and pressing enter will bring up your favorites list.
 - While in your favorites list you can add a channel manually by pressing the green Add button.
 - Press the red button to delete a highlighted favorite.
- Pressing the App Exit button exits the viewing application.

IP TV

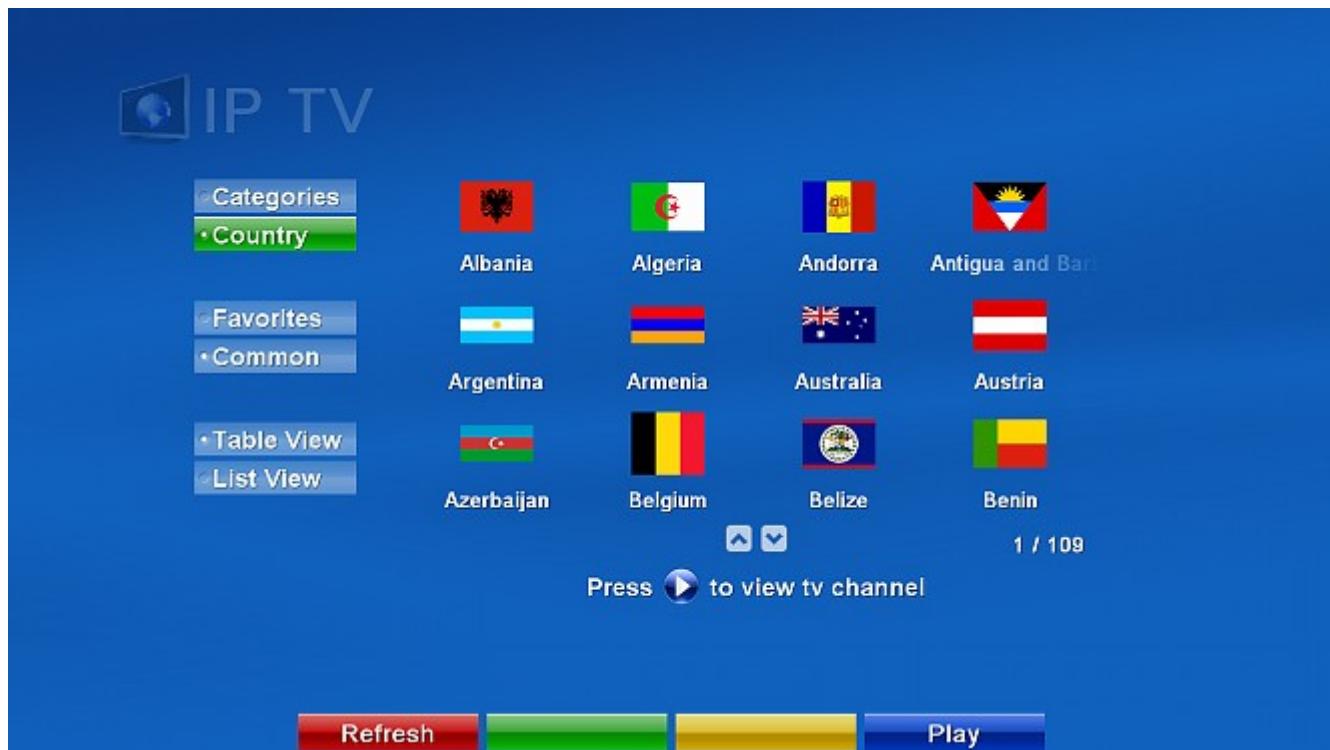
The IPTV viewer application is for viewing streaming video from the Internet. The IPTV function requires a network connection with Internet access. Ensure that network setup has been completed prior to attempting to view IPTV channels.

Categories



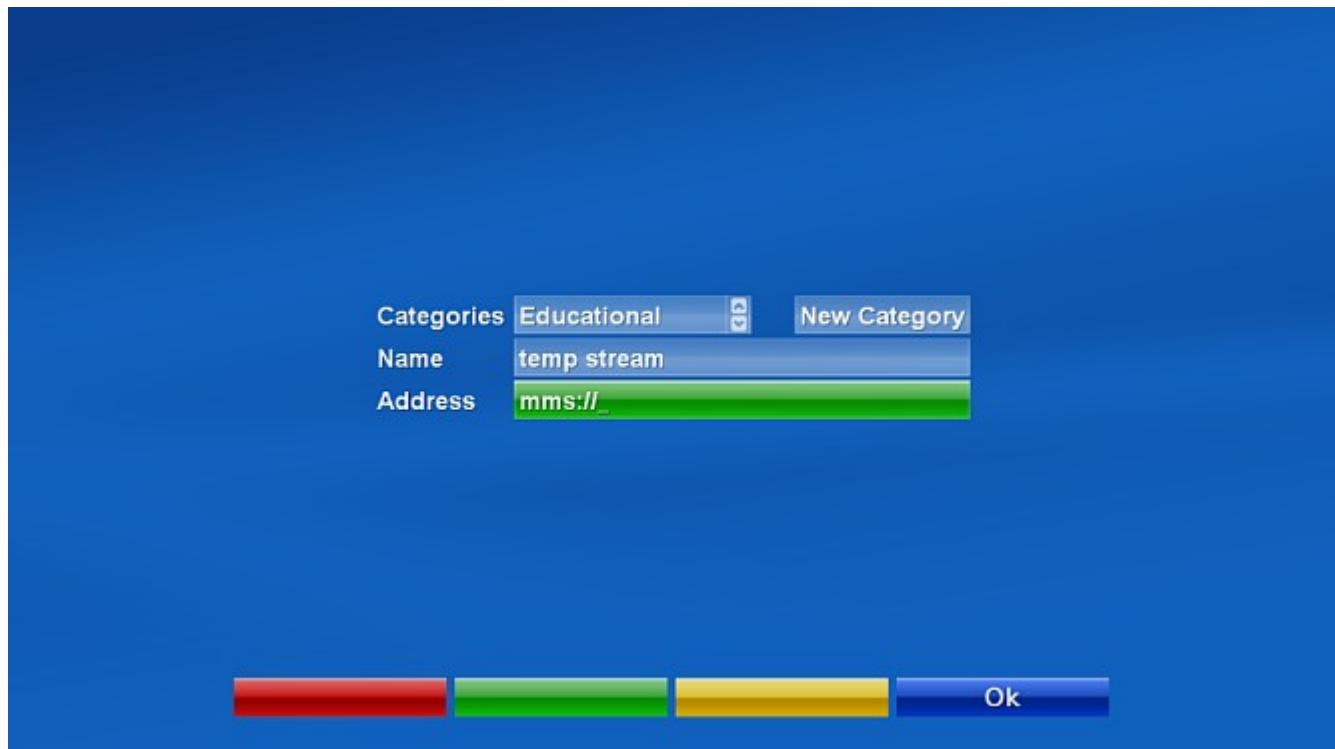
- The default screen is Common->Categories
- Highlight an IPTV category and press the blue button to view the list of channels available under that category.
- Scroll through the channel list and highlight the appropriate channel then press play, enter or the blue view button.
- Pressing the red button refreshes the list.
- You can add channels to a Favorites list by highlighting a channel and pressing the green button.
 - Highlighting the Favorites button on the left and pressing enter will bring up your favorites list.
 - While in your favorites list you can add a channel manually by pressing the green Add button.
 - Press the red button to delete a highlighted favorite.
- Pressing the App Exit button exits the viewing application.

Countries



- Highlighting Common->Country on the left of the screen will present the IPTV list organized by country.
- Highlight an IPTV country and press the blue button to view the list of channels available under that country.
- Scroll through the channel list and highlight the appropriate channel then press play, enter or the blue view button.
- Pressing the red button refreshes the list.
- You can add channels to a Favorites list by highlighting a channel and pressing the green button.
 - Highlighting the Favorites button on the left and pressing enter will bring up your favorites list.
 - While in your favorites list you can add a channel manually by pressing the green Add button.
 - Press the red button to delete a highlighted favorite.
- Pressing the App Exit button exits the viewing application.

Manually adding a Favorite



- You can manually add a favorite to your Favorites list by highlighting either Categories or Country on the left then press the green Add button.
- Fill in the required fields on this screen to add the link to your channel list.
(example address: mms://myiptvlink.net/address)

Remote buttons for IPTV viewer

Button	Function	Button	Function
App Exit	Exit	Play	Play
Stop	Stop	Pause	Pause
Vol+	Vol+	Mute	Mute
Vol-	Vol-		

IP Radio

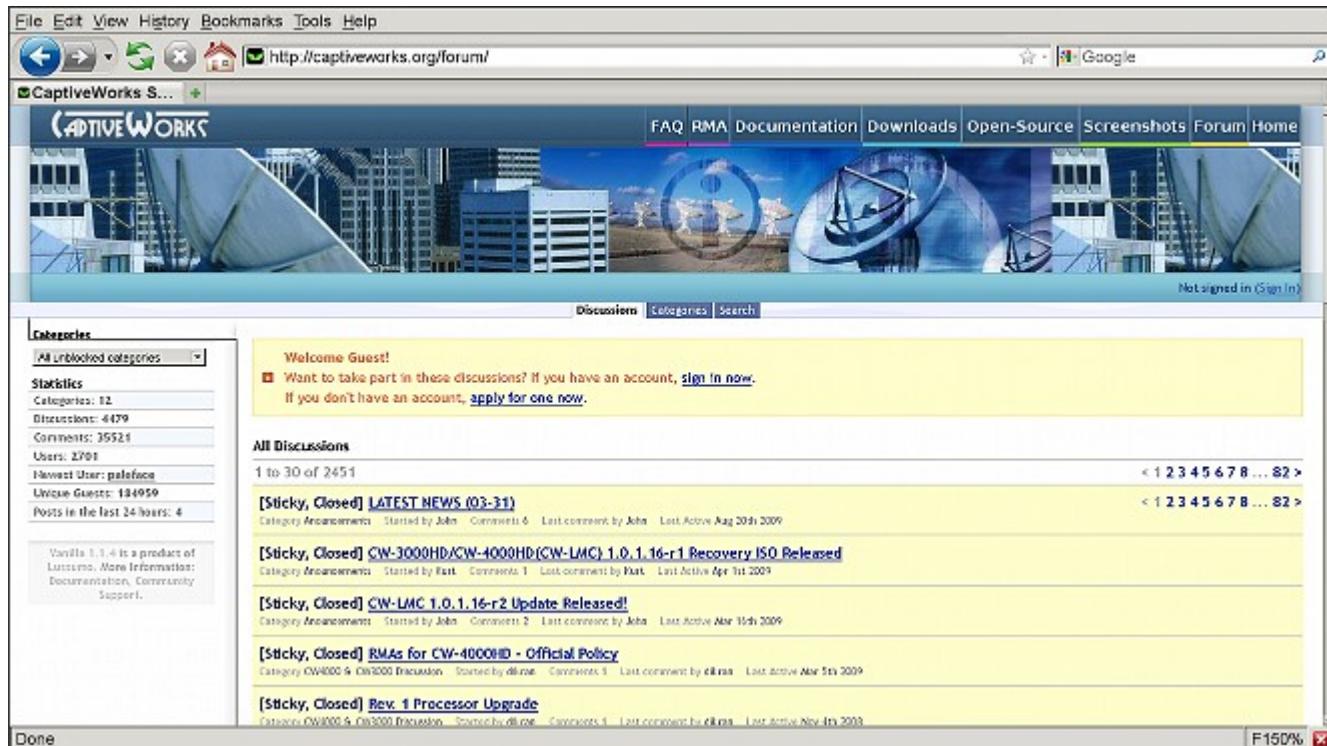


- Highlight an IP Radio category and press the blue button to view the list of channels available under that category.
- Scroll through the channel list and highlight the appropriate channel then press play, enter or the blue view button.
- Pressing the red button refreshes the list.
- You can add channels to a Favorites list by highlighting a channel and pressing the green button.
 - Highlighting the Favorites button on the left and pressing enter will bring up your favorites list.
 - While in your favorites list you can add a channel manually by pressing the green Add button.
 - Press the red button to delete a highlighted favorite.
- Pressing the App Exit button exits the viewing application.

Web

Browser

The browser application is for browsing the internet allowing the user access to their favorite websites and webmail. This award winning Mozilla browser, with proper plugins installed, provides viewing of streaming media from popular video sharing websites and much much more.



- Highlight the Web button and press Enter to begin browsing the Internet.
- The web browser behaves much like that of a desktop computer.
- Pressing the App Exit button exits the browser application.

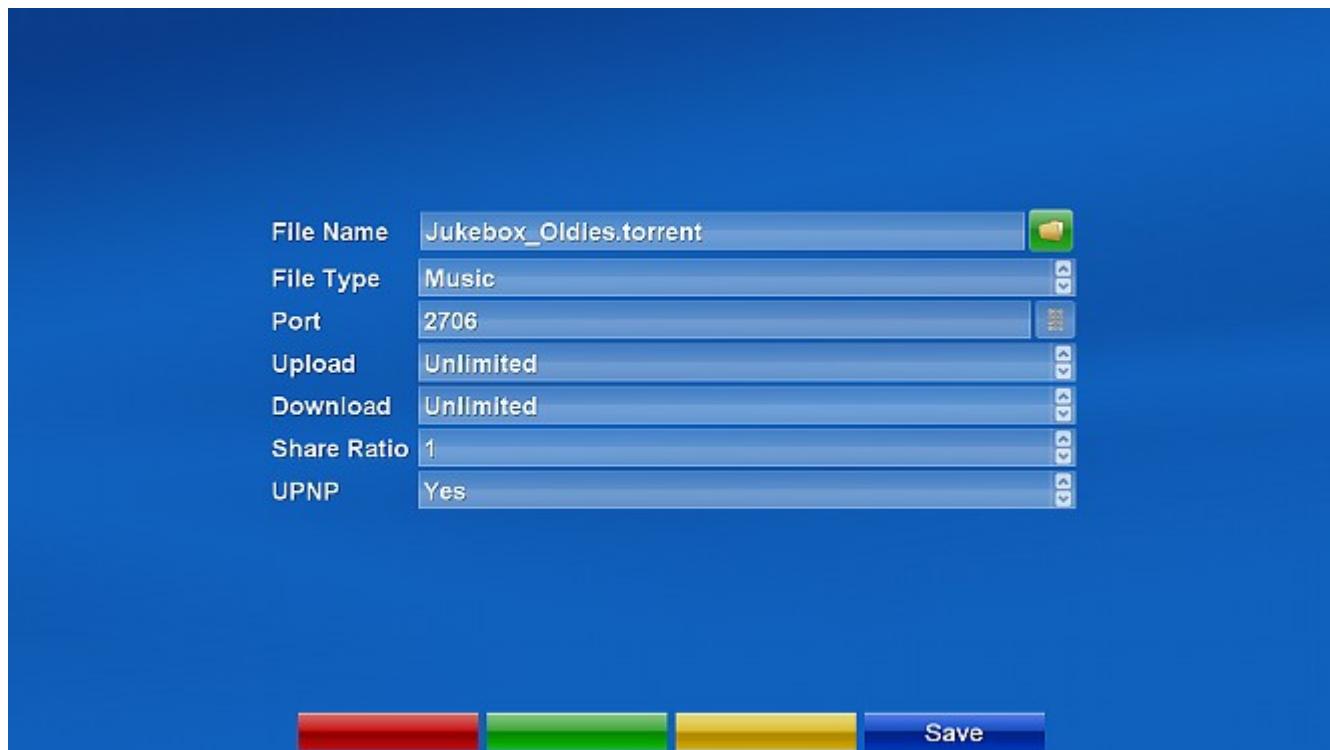
NOTE: If the web browser is not completely visible on your screen see the display configuration section for details on how to adjust the window size.
The web browser is capable of playing the same media formats that the video application does.
Other formats like the flash player require a separate download.
A bookmark for the flash plugin has been provided in the bookmarks.

Bit Torrent



- Highlight the Bit Torrent button and press Enter to view the torrent status list.
- Current torrents are displayed in a list under Transfers.
- Highlighting a transfer will display the current stats of the torrent.
- Press the red Delete button to cancel the highlighted torrent and remove it from the list.

Bit Torrent



- Press the green New button to start a new torrent.
- Highlight the folder icon and browse to your torrent file.
- Highlight your torrent file and press the blue OK button. This will return you to the screen and populate the File Name field.
- Highlight the File Type field and press Enter to activate it.
- Use the Up and Down arrows to select the file type from the list of available types. This will be where the torrent content will be stored.
- Port: Set the incoming port to use for peer connections.
- Upload: Set the maximum upload rate to be negotiated.
- Download: Set the maximum download rate to be negotiated.
- Share Ratio: Set the maximum share ratio allowed.
- UPNP: Set to yes for UPNP capable router.

NOTE: In most cases if the torrent content is in a compressed format it will be extracted after the download completes.

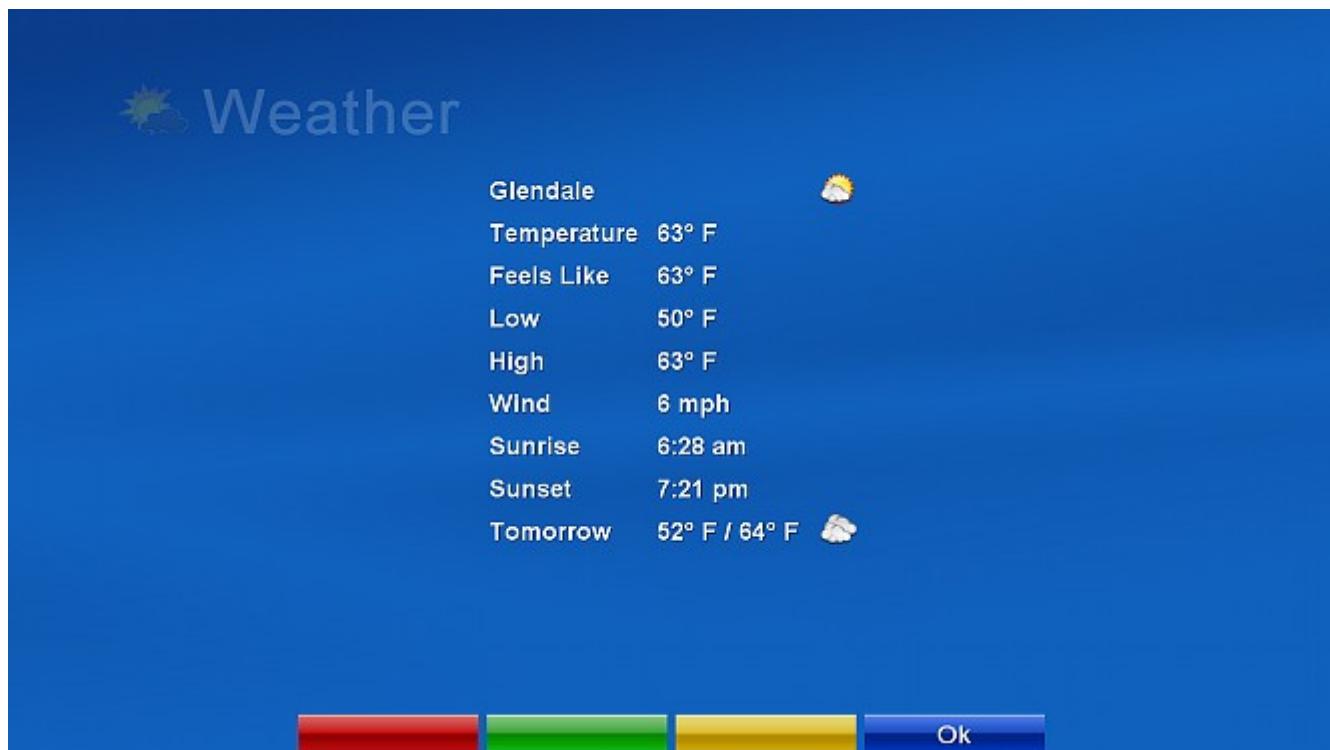
News



- As you highlight one of the Categories the Channels available for that category will be listed on the right.
- Highlight a Channel and press the blue button to view the list of News items under the channel.
- Highlight a news item and press play to view the item.
- You can add channels to a Favorites list by pressing the green button.
- Pressing the App Exit button exits the viewing application.
- Pressing the red button refreshes the list.
- To clear the present news ticker highlight a category then press the yellow button.
- To set a new news ticker highlight a channel then press the yellow button.

NOTE: The news ticker is displayed on the bottom of the screen while in the main user apps menu.

Weather

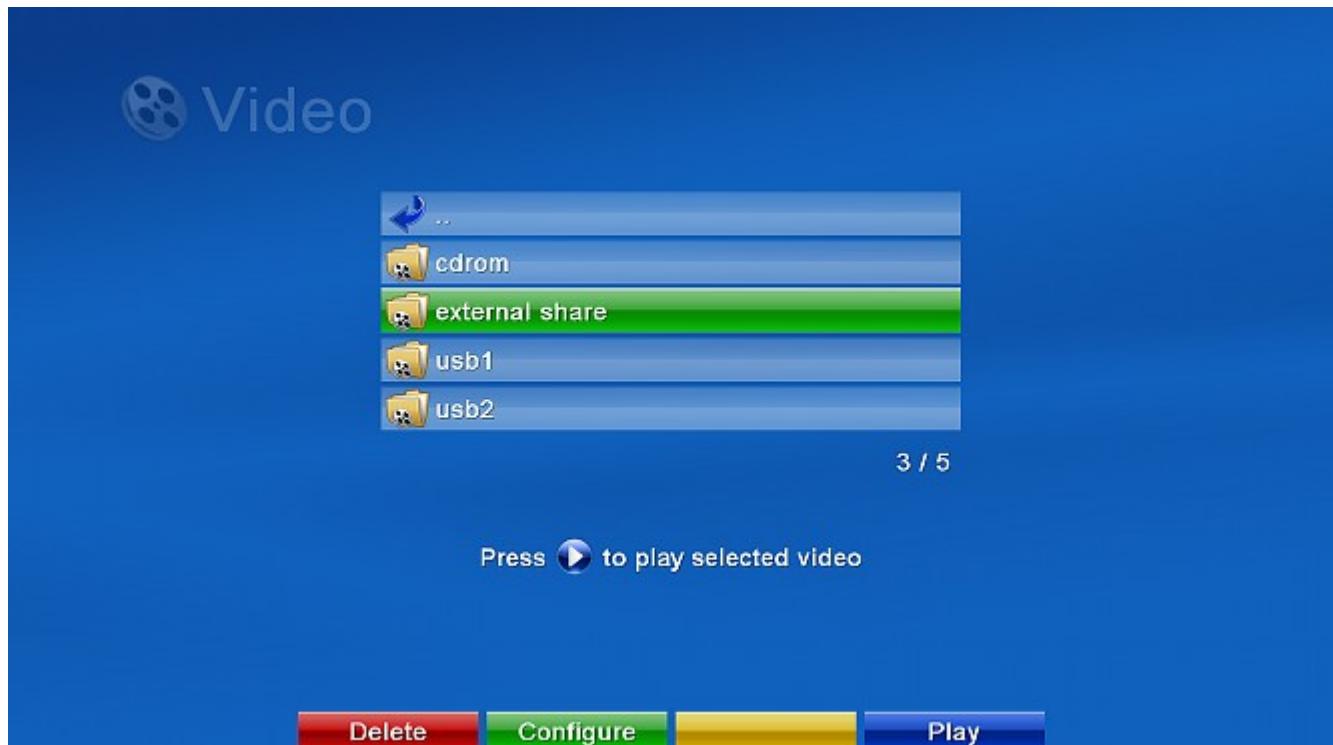


The weather applette provides a listing of extended weather information.

Media

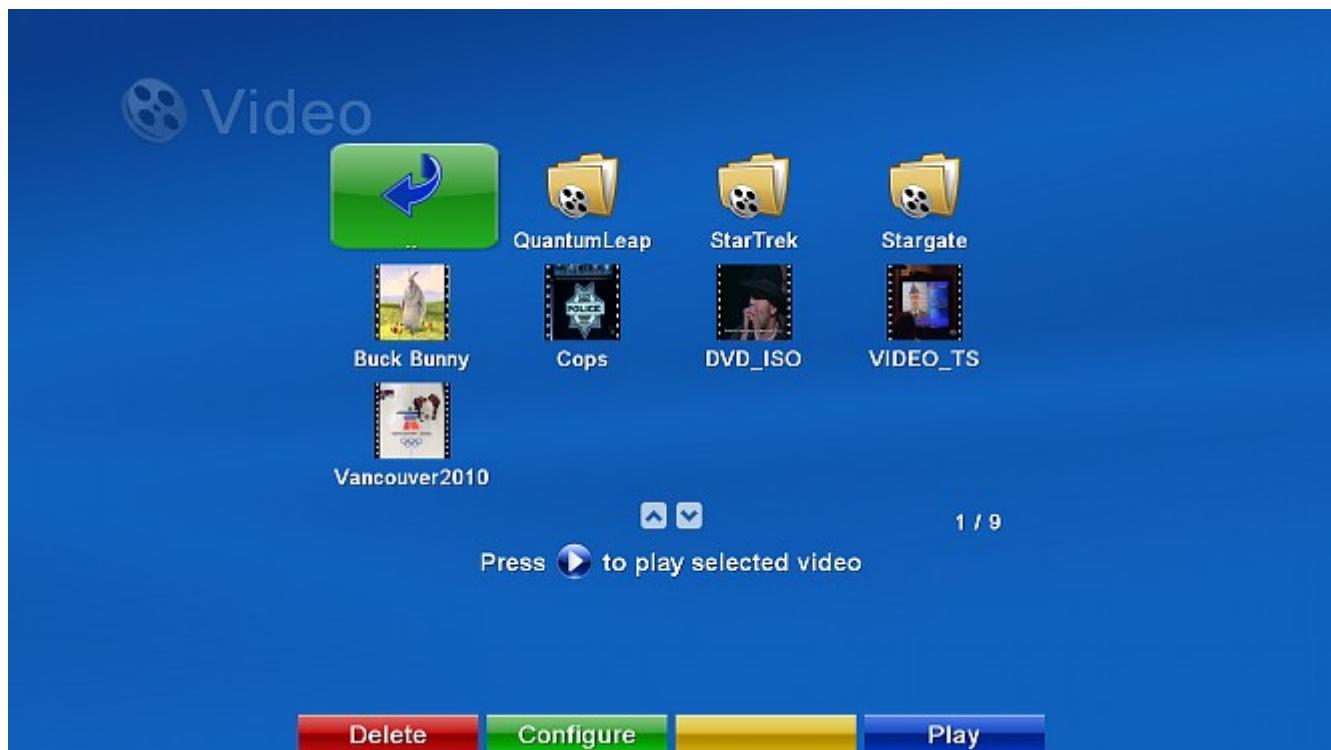
Video

The video application is for viewing movies downloaded from the Internet or other sources. Most video formats including mpeg, avi, divx, wmv, mov and real media files are supported. Note that certain newer formatted wmv files and DRM protected videos will not work with this player. The video application does support subtitle files.



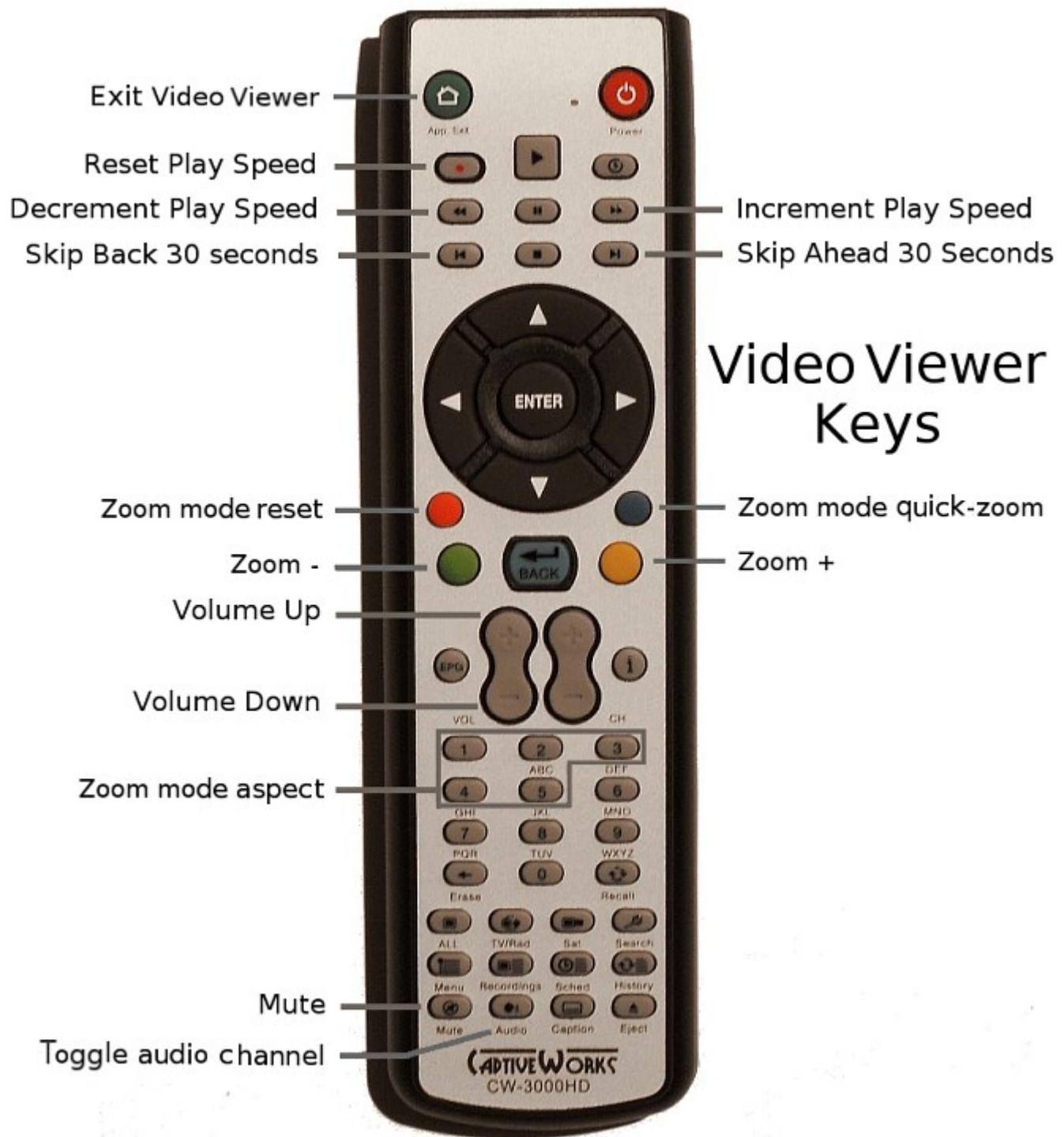
- An initial list is displayed containing two directories “external” and “local”.
- The “local” directory contains any files stored on the local hard drive.
- The “external” directory refers to the CD/DVDROM, a USB stick, or a mapped network share. (ie. Shared Folder)
- Highlight and press enter on the appropriate directories to navigate to the desired file.
- Pressing the Green configure button allows you to change the Media Display to Table View or Icon View.

Video



- Scroll through the file list and highlight the appropriate video then press play, enter or the blue button.
- To delete a file highlight the file and press the red button.
- Pressing the Green configure button allows you to change the Media Display to Table View or Icon View.
- Pressing the App Exit button exits the video application.

NOTE: This video player also supports DVD ISO file playback as well as playback of the DVD file structure which is achieved by selecting ..//VIDEO_TS/VIDEO_TS.IFO



Video Viewer Keys

DVD

The DVD application is for viewing DVD movies on DVD disks.

Press enter on the DVD or VCD button to begin viewing the disc in the drive.

VCD

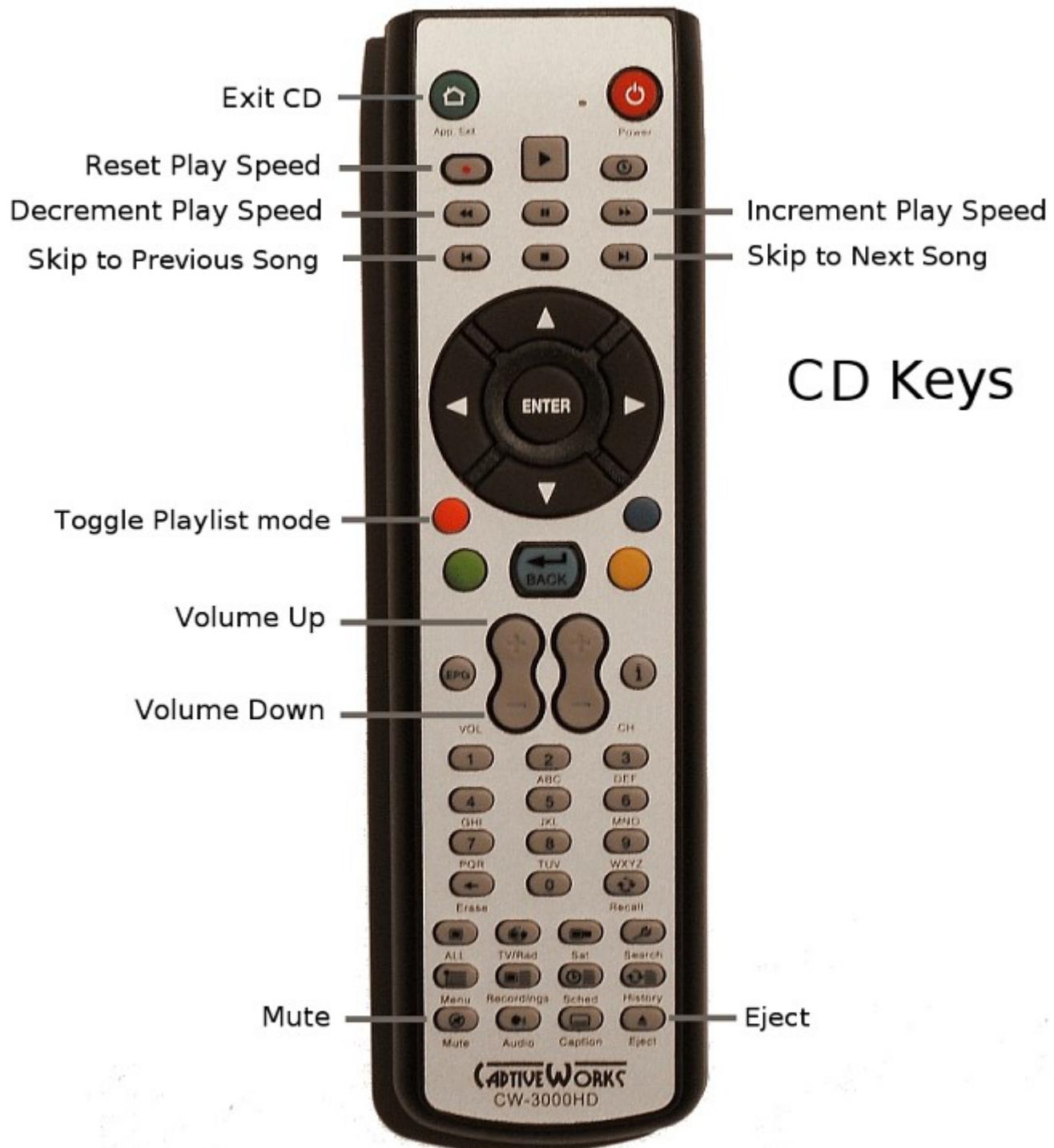
The VCD application is for viewing VCD/SVCD movies on Video discs.



CD

The CD application is for listening to CD music.

Highlight CD in your applications list and press enter to begin playing the CD disc in the drive.



CD Keys



- **Music Selection:**

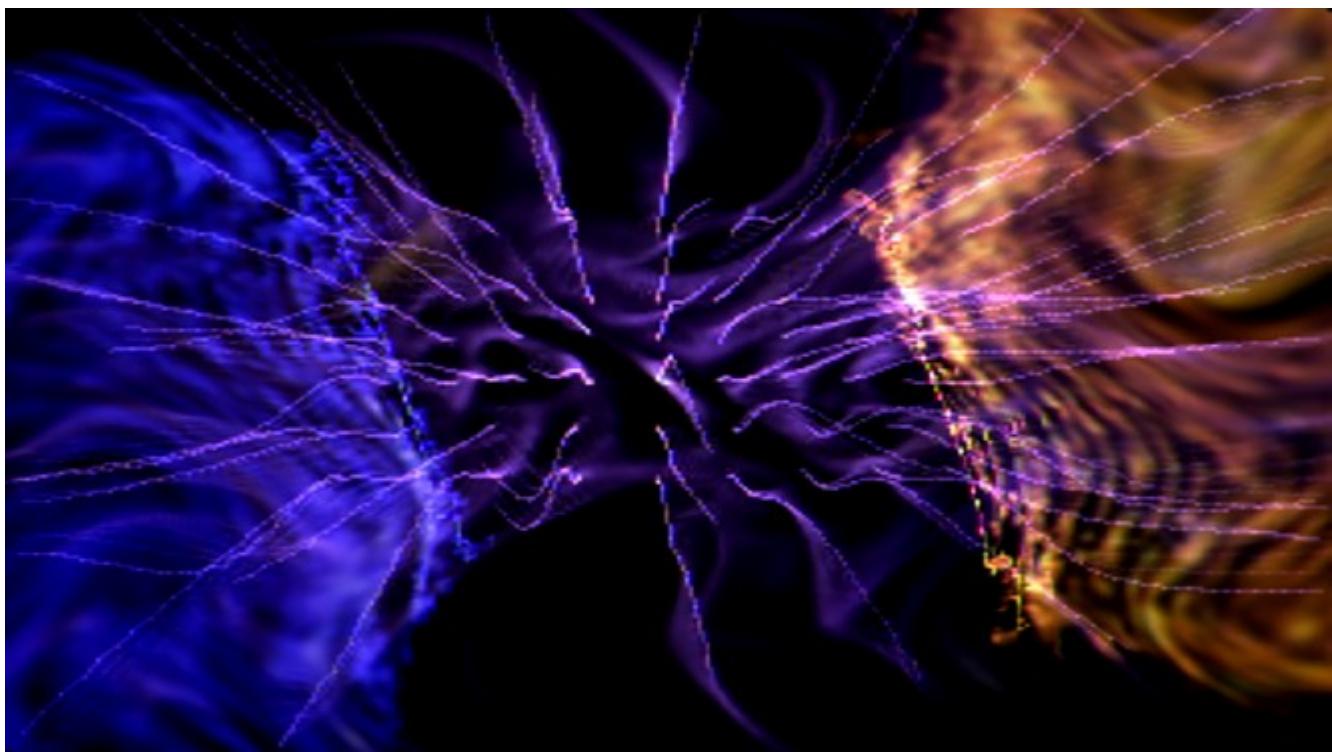
- Any music found on your local or external files sources are automatically organized into a database.
- Your music can be presented in a number of sort methods.
- "Albums" - Songs are presented by the album they belong to.
- "Artists" - Songs are presented on a per Artist basis.
- "Genres" - Songs are presented by their genre type.
- "Folders" - Traditional file folder format to manually navigate to songs.
- "Playlists" - Playlists represent previously saved queues.
- "Queue" - A user selected list of songs.
 - Adding songs to a queue has been arranged so that a user can highlight a selection from anything under a main music type.
 - Example:
 - Highlight a Genre type (ie. Big Band) and press the blue button to add to queue. All songs within that genre will be added to the queue.
 - Press the yellow button to view the current queue.
 - If instead you want to narrow down the selection you could press enter on the genre type and see the various tracks within that genre type and add them to the queue (ie. Big Band – Instrumentals). This narrowing down can be done all the way down to the individual songs.
 - This method can be applied to Albums, Artists and Folders as well.

- **Play Mode:**

- The play mode can be adjusted by highlighting the fields at the upper right side of the screen.
- “Once” will play the playlist in order and then stop.
- “Repeat” will play the playlist in order and then repeat until stopped.
- “Shuffle Once” will randomly play all songs once and then stop.
- “Shuffle Repeat” will randomly play all songs until stopped by the user.
- The play mode may also be changed with the red key while playing.

- **View:**

- At the lower right of the screen highlight icons or list to switch the file view.



The Music application is for listening to audio files in MP3 and other formats from local storage as well as external sources. (e.g. network share, CD/DVDROM, USB stick).

- As music plays it generates a wide spectrum of visualizations.
- Pressing the App Exit button exits the music application.

Note: DRM protected files are not supported.



Music Keys

Pictures

The pictures application allows for high quality picture viewing in a slideshow format or single viewing. It has other popular features like image zoom, pan and rotate.



- A list of files and directories will be displayed containing two directories “external” and “local”..
- The “local” directory contains any downloaded files from the Internet or files copied to the CW-LMC from your home network.
- The external” directory refers a USB stick, network share, or CD/DVD-ROM.
- Highlight the appropriate directory and press enter.
- If “local” is selected, a list of picture files will be shown.
- If “external” is selected, a list of devices will be shown. Choose the appropriate device (USB, CD, etc) to see a list of files on the device.
- Select a picture and press play, enter or the blue button to view it.
- Select a folder of pictures and press the yellow button for a slideshow.
- Pressing the App Exit button exits the picture viewing application.



Picture Viewer Keys

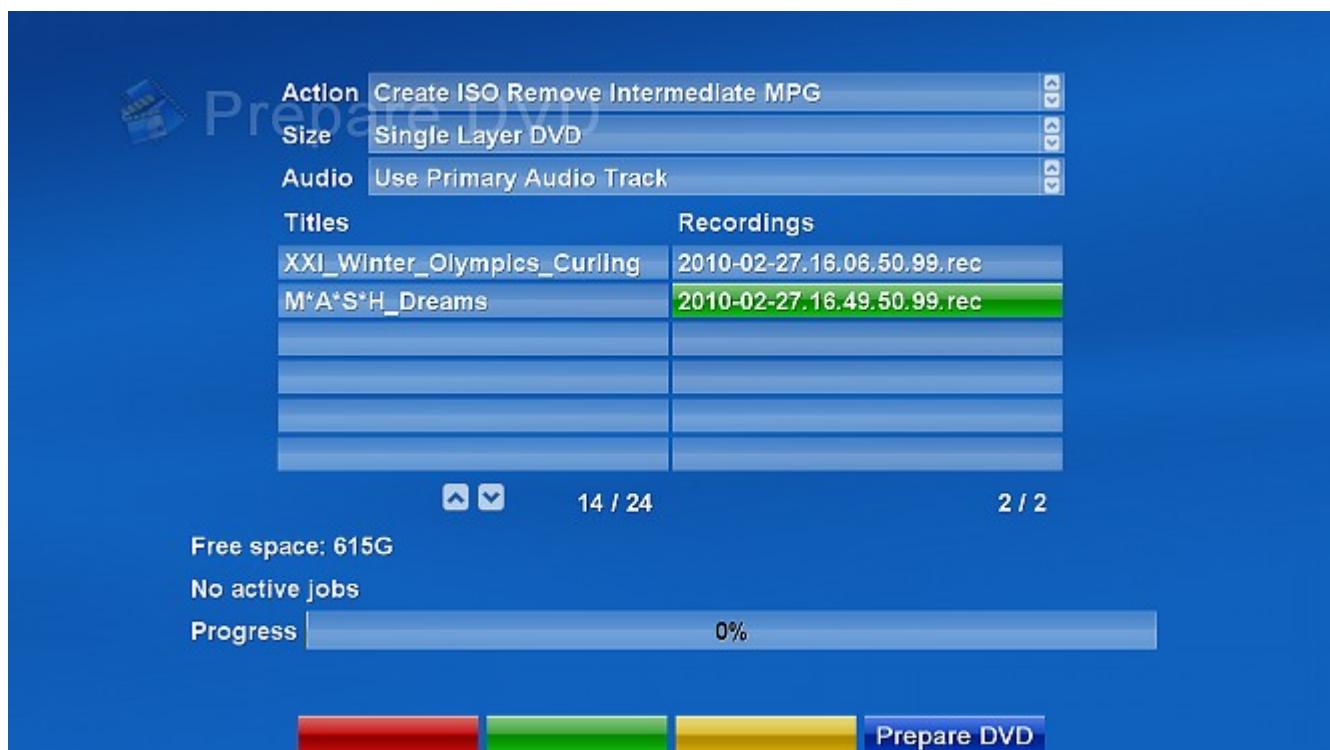
- Exit Viewer
- Slideshow
- Previous Image
- First Image
- Pan Image Left
- Rotate 90 CC
- Zoom -
- Reset Image
- Flip
- Refresh
- Mirror
- Zoom 1:1
- Zoom 2:1
- Zoom 3:1
- Zoom 4:1
- Power
- App. List
- Next Image
- Last Image
- Pan Image Up
- Pan Image Right
- Pan Image Down
- Rotate 90
- Zoom +
- Zoom +
- Zoom -

Roaster

Roaster is an application for converting video recordings and burn content to CD/DVD media.

- Prepare DVD - Convert HD and SD recordings to DVD-ISO image.
- Prepare Video - Create HD or SD MPG-ISO image of recordings.
- Merge DVD – Merge multiple DVD-ISO images.
- Merge Video - Merge multiple MPG-ISO images.
- Burn DVD - Burn DVD-ISO images to DVD media.
- Burn Video - Burn MPG-ISO images to CD/DVD media.
- Burn Data – Burn data files directly to CD/DVD media.

Prepare DVD



- Highlight and browse the Titles
- Highlight the recording under the title you wish to prepare
- Press the blue button to Prepare DVD of the recording
- Press the green button to cancel

When active, Roaster will update the screen with messages displaying the current operation and display the percentage of progress per operation. Recordings created with the Satellite TV application are comprised of multiple segments. The Prepare DVD process begins with the last segment and works it's way down to the first segment. After all segments have been converted to a DVD compliant MPG format It creates a DVD-ISO image which can be written to DVD media from within the Burn DVD section.

Space requirements for Prepare DVD

Prepare DVD requires a substantial amount of free space for it's conversion and image creation processes. You will need approximately 3.5 times the size of your recording as free space. A 2 hour HD recording will usually have about 7-8 segments of 2 GB each. A 2 hour SD recording will usually have about 1-2 segments of 2 GB each. If your free space is limited make sure you do not have any recordings going or timers set to record.

HD Recordings & Prepare DVD

Converting HD recordings requires a fair amount time and CPU power. The less CPU dedicated to other tasks the quicker the conversion process will be.

Ways of freeing up CPU for Roaster

While in your user profile the Satellite TV application is always running. This means if you are tuned to an HD channel you are dedicating a significant amount of your CPU to the Satellite TV application even if you aren't watching it. When at all possible keep the Satellite TV application tuned to an SD channel and do not record TV shows while Roaster is active.

The absolute quickest way to convert HD recordings is to start the Prepare DVD process then log out of the user profile. This will completely free up the CPU for Roaster. Users may find this the most preferred and time saving method for overnight processing.

Other Notes of Interest

- Roaster is designed to perform only one job at a time.
- HD recordings take about an hour per gig. Longer while other applications are running.
- Since Roaster jobs are background processes, meaning they run in the background and do not stop when a profile is exited, the job itself will continue even when a different user is logged in. These specific video files of another user are not accessible by other users, but since the Roaster job is running they will be able to view the job progress and Roaster will not be free to use. If you do not think a user is responsible enough to operate Roaster then remove that application from their application list.

Prepare Video



- Highlight and browse the Titles
- Highlight the recording under the title you wish to prepare
- Press the blue button to Prepare Video of the recording
- Press the green button to cancel

Recordings created with the Satellite TV application are comprised of multiple segments. Prepare Video allows you to create a disc image containing the separate video segments of your recordings. Prepare Video does not down convert the recordings. HD segments remain HD, SD segments are made DVD compliant for improved compatibility.

When active, Roaster will update the screen with messages displaying the current operation and display the percentage of progress per operation. The Prepare Video process begins with the last segment and works its way down to the first segment. After all segments have been converted to MPG format It creates an MPG-ISO image which can be written to CD/DVD media from within the Burn Video section.

Merge DVD



Once you have performed Prepare DVD on some recordings it is possible to merge these DVD ISO's together into a multi-recording DVD ISO.

- Pressing the red Test button on a prepared recording on the left will play the recording.
- Highlight the prepared recordings on the left that you wish to merge.
- Pressing the yellow Add button will add the prepared recording to the list on the right of DVD ISO's to be merged.
- Pressing the green Add All button will add all the prepared recordings listed on the left to the list on the right of DVD ISO's to be merged.
- Once you have the DVD ISO's selected press the blue Merge DVD button.

Merge Video



Once you have performed Prepare Video on some recordings it is possible to merge these MPG ISO's together into a multi-file MPG ISO.

- Pressing the red Test button on a prepared recording on the left will play the recording.
- Highlight the prepared recordings on the left that you wish to merge.
- Pressing the yellow Add button will add the prepared recording to the list on the right of MPG ISO's to be merged.
- Pressing the green Add All button will add all the prepared recordings listed on the left to the list on the right of MPG ISO's to be merged.
- Once you have the MPG ISO's selected press the blue Merge Video button.

Burn DVD



Once Prepare DVD has completed enter Burn DVD section and highlight the DVD Image file. Insert blank DVD media that is large enough to accommodate the size of the image. The size is displayed at the upper right of the screen.

- Burn DVD starts the write process
- Delete allows you to delete the Image files

NOTE:

This screen is designed that once the job is active you must wait for it to finish. This is to prevent a failed write due to other processes that could potentially interfere.

Burn Video



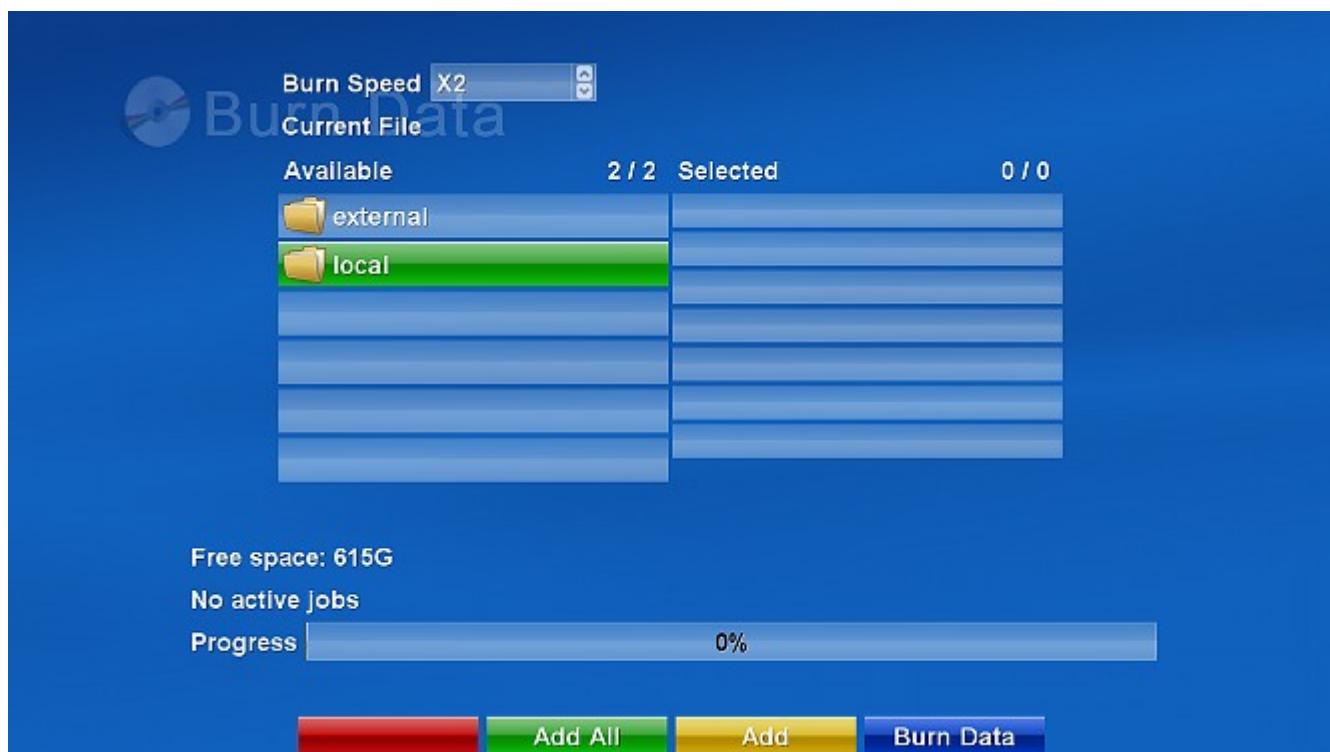
Once Prepare Video has completed enter Burn Video section and highlight the Image file. Insert the appropriate blank media that is large enough to accommodate the size of the image. The size is displayed at the upper right of the screen.

- Burn Video starts the write process
- Delete allows you to delete the Image files

NOTE:

This screen is designed that once the job is active you must wait for it to finish. This is to prevent a failed write due to other processes that could potentially interfere.

Burn Data



Burn Data allows you to burn files of any type you have locally or externally connected to the system.

- Browse the filesystem on the left and highlight the files that you wish to burn.
- Pressing the yellow Add button will add the file to the list on the right of files to be burned.
- Pressing the green Add All button will add all the files listed on the left to the list on the right of files to be burned.
- Once you have the files selected press the blue Burn Data button.

Extras

File Manager



File Manager allows you to move files from one location to another.

- Browse the filesystem on the left and highlight the file that you wish to copy or move.
- Browse the filesystem on the right and highlight the location you wish to copy or move the file to.
- Pressing the red Copy button will copy the file to the location on the right.
- Pressing the green Move button will copy the file to the location on the right.
- Pressing the yellow Delete button will delete the file or folder highlighted.

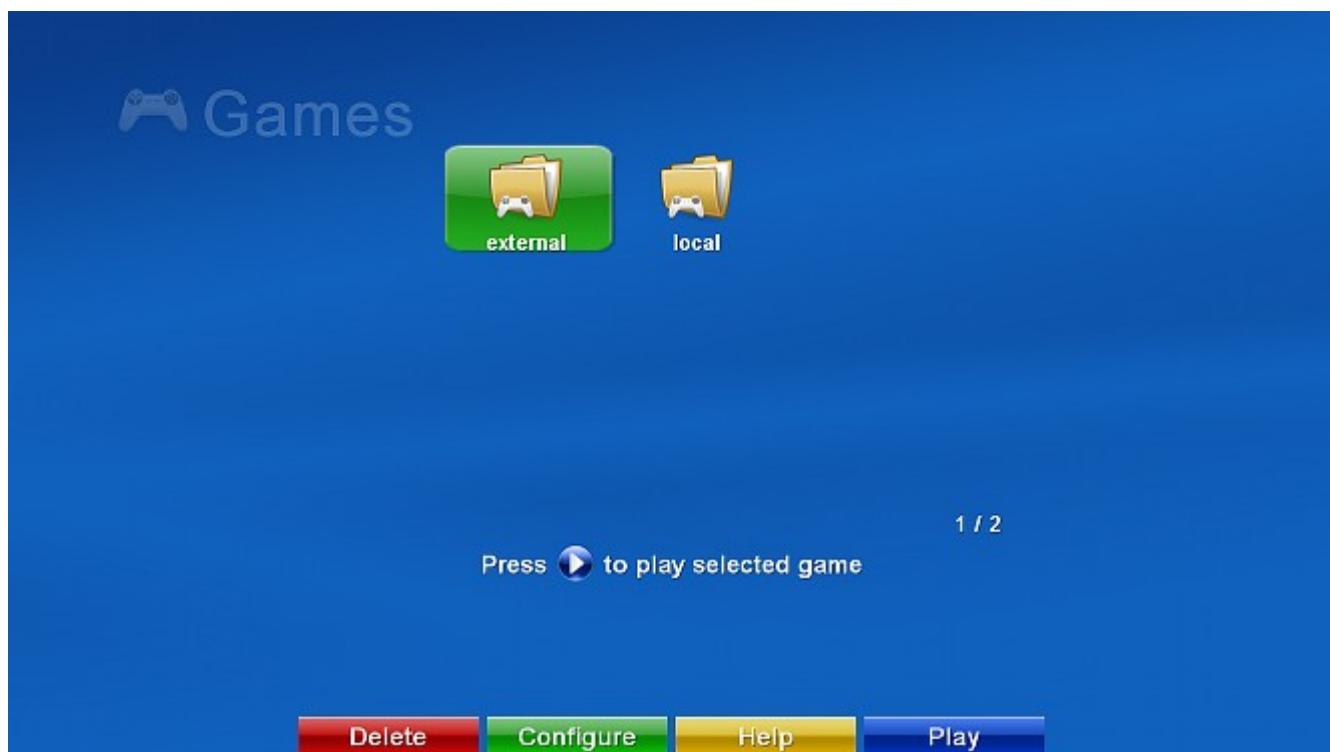
CD Ripper



CD Ripper allows you to make copies of the audio tracks on your CD.

- Highlight folder icon on the right and browse the filesystem to select a location for the song files to be stored and press the blue OK button.
- Load the CD in the tray and press the red Scan button.
- With an Internet connection the system will retrieve a list of matches of the source CD.
- When the scan completes highlight the Matches field and select the Title that best suits the CD content.
- Pressing the yellow Edit button on a highlighted track will allow you to alter the text of the track.
- Pressing the green Configure button will allow you to set the quality and format of the song files to be created.
- Pressing the blue Rip CD button will start the CD ripping process.

Games



The games package is not part of the stock system. It is available as a separate download at

<http://www.captiveworks.org/games/> for those legally entitled to its proper use.
To install the package please refer to the 'Installing Updates' section.

- Pressing the green help button will access the help file that is provided by the installation package.
It is recommended that you read through all the pages of the help file.
- Pressing the red delete button will delete highlighted game.
- Pressing the blue play button will start the game.

NOTE: If for some reason your game will not launch check the game log. It can provide insight into issues like mistakenly forgetting to include all required files. For specific game troubleshooting refer to the Internet and utilize a search engine.

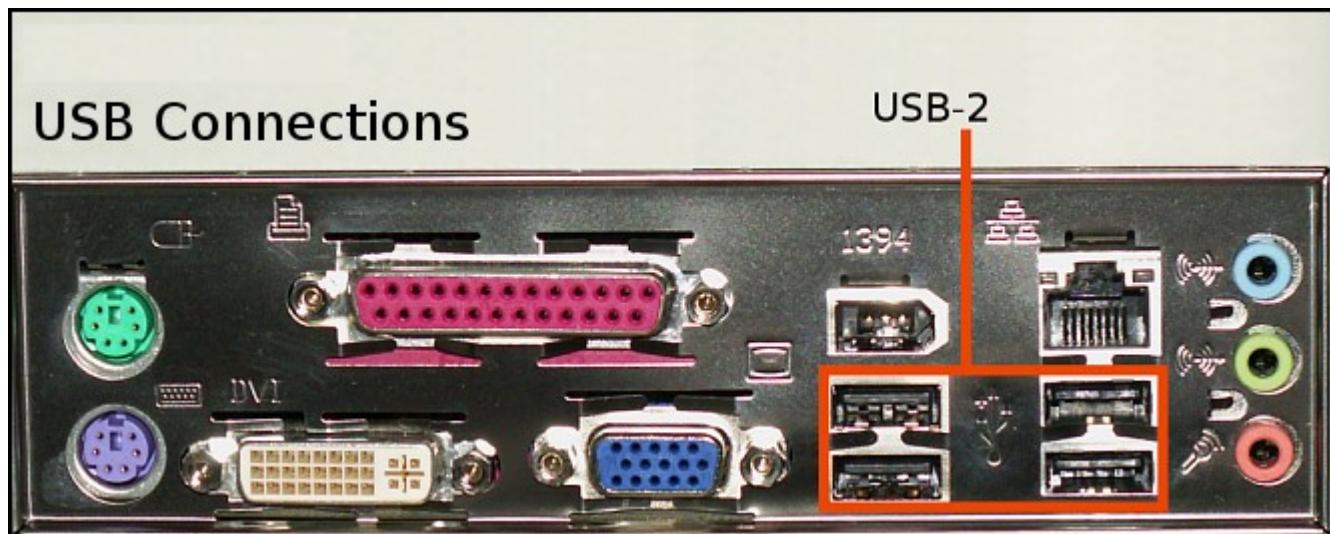
The CaptiveWorks forum will not provide any games support.

Appendix

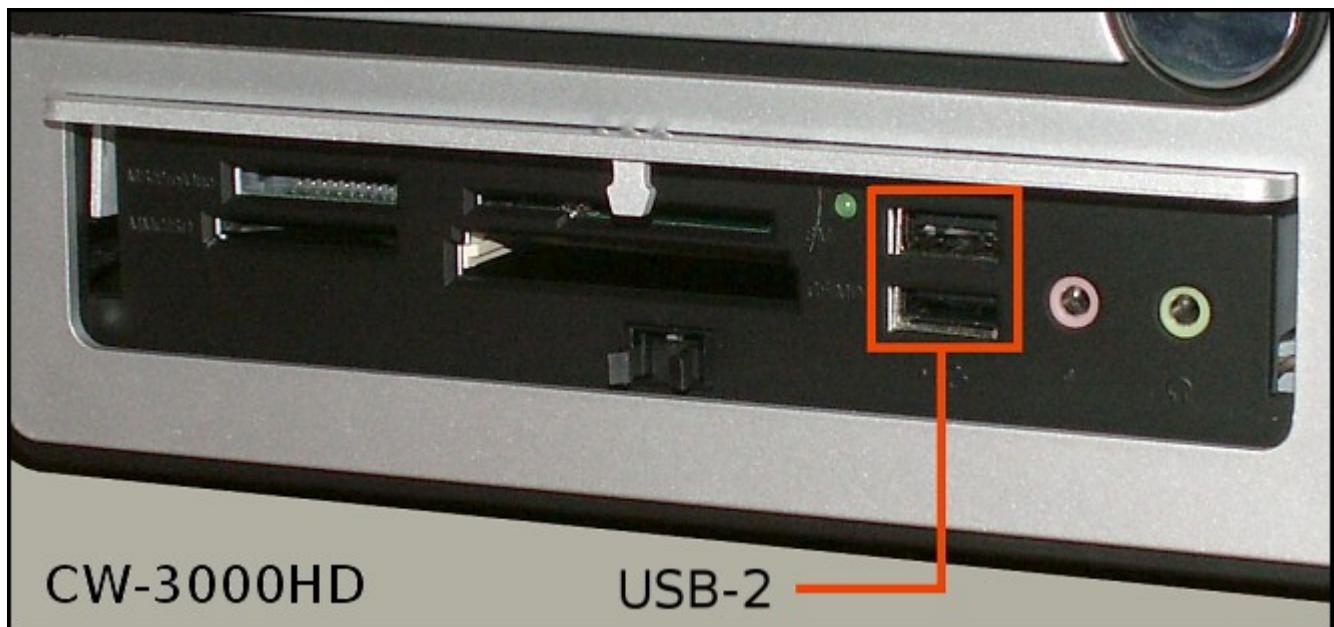
External USB device connection

The Media Center can make use of optional external devices to extend the functionality of the system. USB memory stick can also be used to play audio and video files. A USB memory stick may also be used to update the software on a system that has no access to the Internet.

The connections are a standard PC style USB interface on the front and rear of the system. The ports are USB v2.0 and are backwards compatible with USB v1.1 devices.



Read the users manual for the external device to ensure that it is set up correctly. Software installation steps may safely be ignored as the Media Center already has the drivers and software for supported devices. Connect the USB cable to one of the USB ports on the front or back panel. In the case of a USB memory stick, it may be inserted directly into one of the USB ports.



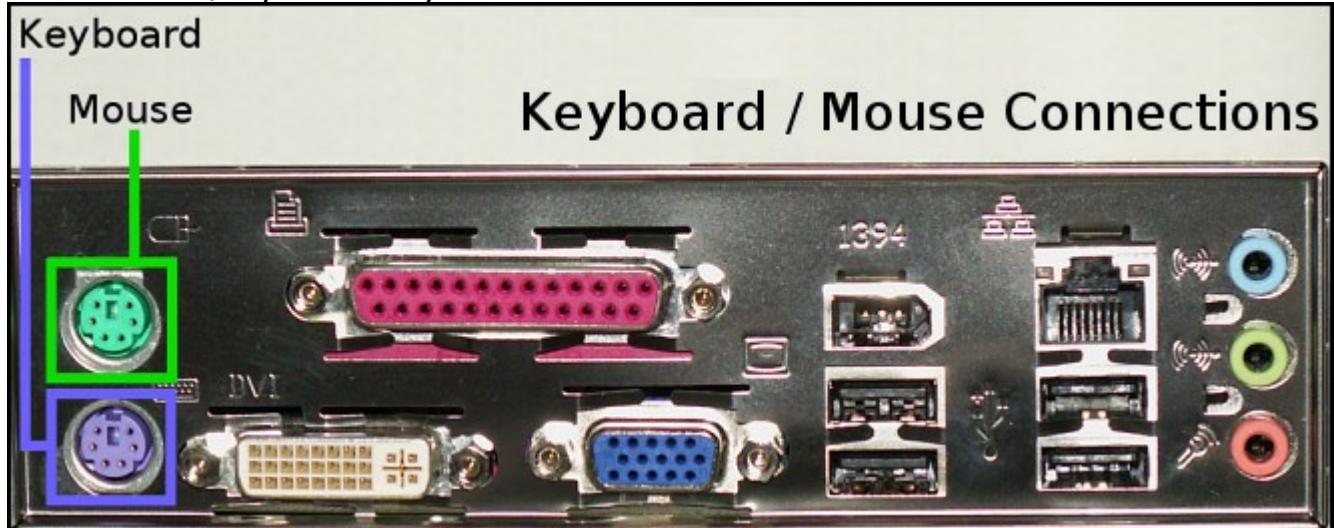
Keyboard / Mouse Connection

A keyboard and mouse may be used with the CW-3000HD for ease in using the web browser or other future enhancements.

The labeled connections below are for connecting a PC style PS/2 keyboard and mouse.

Ensure that the correct device is connected to the appropriate port.

A USB mouse/keyboard may also be used with the Media Center.



Networking with Windows PC's

Here are a couple of quick little howto/suggestions for those that use Windows.

Seeing files over the network

(Example:) Click on My Network Places

If you don't see the workgroup 'WORKGROUP' or don't see the CW3000HD then click Search

Under computer name enter CW3000HD and click search

It should then show up under the My Network Places window named 'CAPTIVEWORKS (cw3000hd)'

For future ease of use you can drag this to the desktop if you like.

Another way to quickly view the CW3000HD is to type in the explorer bar:
\\Cw3000hd\

or if you prefer, by IP:

example: \\192.168.1.102\

Enabling more shared folders

The logs, and updates shares are shared by default.

If you go into the Admin screen to edit a user profile and enable the 'share over network' when you don't have a hard drive the setting will be ignored. Once you have a hard drive installed the common folders share is started automatically.

The personal folders can be shared by going back into the Profile section of the Admin screen and **re-save the shared user profile**.

Playing your recordings over the network

Install vlc if you don't already have it installed.

Browse to the video folder share of your choice (ie. common\video .. user\video, etc)

Navigate down in one of your recording folders until you see the 001.vdr, 002.vdr files.

If you have never played a .vdr file with vlc you'll need to associate it.

Simply right-click on the file and click properties.

Beside Opens with: you should see a Change.. button

Click Change..

You should be able to browse and select vlc media player out of the list.

Once that is done you should be able to right-click and Play the recordings.

Remote Control - Keyboard Cross-reference

The remote control actions can be duplicated when using a keyboard with these keystrokes.

Power	CTRL+P
Exit App	CTRL+X
Timer	CTRL+T
Play	CTRL+Y
Pause	CTRL+U
Stop	CTRL+O
Record	CTRL+R
Rewind	CTRL+W
Fast Forward	CTRL+F
Skip Back	CTRL+B
Skip Forward	CTRL+D
Ok	ENTER
Back	ESC
RED	F1
GREEN	F2
YELLOW	F3
BLUE	F4
EPG	CTRL+G
i	CTRL+i
VOL +	KP_Multiply
VOL -	KP_Divide
CH +	KP_Add
CH -	KP_Subtract
Erase	BCK SPACE
Recall	CTRL+L
All	CTRL+A
TV/Rad	CTRL+V
Sat	CTRL+S
Search	CTRL+E
Menu	CTRL+M
Recordings	CTRL+K
Schedule	CTRL+C
History	CTRL+H
Mute	CTRL+Q
Audio	CTRL+Z
Caption	CTRL+N
Eject	CTRL+J

Troubleshooting

If you need further troubleshooting assistance please visit the on-line forums

<http://captiveworks.org/forum/>

Please refer to the Latest News thread before posting.

Accessing Logs

A good way to diagnose is to look through log files. Log files can be accessed in a number of different ways.

The system by default has the following to make accessing the logs convenient:

- A Windows style network share named logs. This means should be accessible from within My Network Places of your networked Windows PC.
- A web based 'logs' access point. This means you should be able to point the web browser of a Networked PC to the IP of your Media Center.
(example: http://192.168.1.103)
- Another option is to use an external utility like WinSCP and access the internal / var/logs folder.

BIOS Settings

CW-3000HD Rev.1

- Main-> Primary IDE Master-> UDMA Mode -> disable
- Advanced -> CPU Configuration-> AMD Cool 'n' Quiet Function-> Auto
- Advanced-> Chipset-> Frame Buffer Size-> 64M
- Advanced-> Chipset-> TV Mode Support-> NTSC-M
- Power-> Hardware Monitor-> Q-Fan Controller-> Enabled
- Boot-> Hard Disk Drives-> 1. 1st Master: Flash Card

CW-3000HD Rev2, CW-4000HD

- Standard CMOS Features->> Floppy Drive A->> Not Installed
- Advanced Bios Features->> Chipset Feature->> HPET->> Enabled
- Advanced Bios Features->> Chipset Feature->> iGPU Frame Buffer Detect ->> Disabled
- Advanced Bios Features->> Chipset Feature->> OnChip VGA Frame Buffer Size->> 64MB
- Integrated Peripherals->> TV Mode support->> NTSC_M
- Integrated Peripherals->> On-Chip ATA Devices->> PCI IDE BusMaster->> Disabled
- H/W Monitor->> CPU Smart FAN Target->> 40
- H/W Monitor->> CPU Min. FAN Speed (%)>> 50

Display Diagnostics

I see the initial boot screens and then the screen goes blank.

The Media Center supports one method of video connection at a time. Double-check your cable connections to ensure your TV (or monitor) is hooked up using only one display connector method. If after turning the unit on you get a blank screen after the initial boot screens then wait a few minutes for the unit to be able to accept remote input and carefully point the remote control at the unit and press 1346. The unit should reboot with a default display setting. After that try a more compatible video setting that corresponds with your display devices capabilities.

NOTE: When using DVI-HDMI it is also important to use a short 'low-loss/low-noise' cable to ensure your Media Center can communicate properly with your display device and negotiate a setting approved by your display device. (shortest possible cable the better)

I do not see the boot screens, but I see the menu after it boots.

Some TVs may not support the lower display resolution of the boot screens when utilizing the DVI display mode. If you happen to have this issue and find this to be unacceptable try utilizing a different display connection such as VGA or Component.

I do not see the boot screens, all I get is a blank screen.

If your Media Center does not display any video when you first hook it up it is possible that the memory became unseated from its slot during shipping. The first thing to do is to disconnect the box from power and open the top lid. Locate the memory module under the DVD tray. You may have to unscrew the DVD tray to get to it. Unclip the latches on the two sides of the memory then push the memory back in its slot so that you hear the clicking sound from the latches on both sides. Screw the DVD tray back in place. (Be careful not to disconnect any cables in the process) Close the top lid and reconnect the power cord. Turn the unit on and see if it makes a difference.

Remote Control Diagnostics

My remote wont work unless I am three feet or less from the box, new battery's didn't help. What can I do to increase the range?

During assembly of some of the initial CW-3000HD units there were cases where the remote sensor was out of alignment.

If you pop the front cover off (grasp the sides and carefully pull forward with both hands you will see the remote sensor board on the right side(it's the long PCB).

Unscrew it and adjust the sensor so it is in the middle of ir window. Put it back together and try it again.

NOTE: If the sensor still doesn't line up good enough you could do what some people have done and unscrew the bottom screw and move the board until the eye is directly in line with the window. Once the unit is not going to be moved too much, the top screw will be enough to hold it in place.

My remote is acting up. I am getting random key strokes. What can I do?

When the batteries get low the remote begins to lose its range. When trying to use the remote at its range limit it can misinterpret the key presses and give incorrect key strokes. Replace the batteries and try it again. If the random keystrokes continue it may be a sensor misalignment.(you can test this by using the remote directly in front of the unit). See the statement above for increasing the range.

I think the random keystrokes have locked up some buttons on my remote. How can I get them back?

If the remote gets in a state where keys are not responding exit the user profile and return to the main screen. Press the Power button on the remote and select Shutdown. In these cases a complete shutdown is necessary since a reboot keeps the remote circuits powered. When it is powered off the remote circuits are then cleared. The remote should return to normal when the unit is powered back on at that point.
NOTE: Pre - 1.0.1.9 systems have a repeat key issue from within Satellite TV, please check your version and update.

Roaster Diagnostics

I get a ring buffer overrun

Sometimes the relationship between the audio and video stream information can get a little out of sorts in sections of a recording. In order to make a proper DVD of the recording the prepare process needs to make sure the information is set straight. If it is not within tolerance you can receive a ring buffer overrun error along with the message to try re-editing the recording.

The process of editing the recording from within Satellite TV and trimming it slightly can usually repair the recording. The editing process recombines the recording segments and can usually set the information straight.

Satellite TV Diagnostics

I get a black screen when switching channels

Double-check your adapter settings and ensure any unused adapters are disabled then re-save.

I receive a Media Not Available message

If you receive a Media Not Available message while in Satellite TV it means that something has caused VDR (the application receiving the signal) to terminate.

Manually type in a FTA channel and check the strength and the quality of the signal by pressing the Menu button and select Signal Information. It is important that both meters STR & SNR are steadily in the green.

- If the values are too low you may need to readjust or increase the size of your antenna.

- If the strength(STR) is good, but the quality(SNR) is poor or fluctuating:
 - It may be that you are getting interference(noise) somewhere between your antenna and your Media Center. That being the case you will have to recheck your cabling and any other component in between (diplexers, splitters, barrel connectors, etc.). Start by simplifying your setup and use a direct line. If that solves the issue add any component back one at a time until you can determine the culprit causing the noise.
 - It may be that you have an improperly grounded antenna setup. This can cause fluctuations and tuning problems. It is strongly advised that you to read National Electric Code if you plan to do the dish installation yourself. Particularly, section 810-20 or hire a certified technician/electrician to do the job.
 - It may be that you have inadequate cooling. Poor airflow can cause the tuner cards to decrease efficiency due to heat. If the issue started shortly after the addition of a hard drive it may be that some cables were accidentally moved and are now impeding air flow.
 - There might be a slim chance that during shipment the internal tuner cards became slightly unseated. Disconnect the box from power and open the top lid. Locate the tuner cards. Unscrew, remove, then return it to its original slot to ensure it is properly seated. Repeat for the next card.

Try creating a new user profile to see if it is limited to a specific profile.

I get audio stutter on some channels

This can sometimes happen if a channel has a low quality (SNR) signal. To verify that this is most likely the cause check the strength and the quality of the signal by pressing the Menu button and select Signal Information.

- A commonly used method to minimize the stutter is to briefly press pause then press pause again to increase the amount of prebuffering.

Shared Folders Diagnostics

I need more details

When sharing a drive in Windows using drive k: as an example you will want to assign a share name for it something like drive_k. Assigning a drive is done by right-clicking and selecting 'share as'. If your Windows machine has an IP of 192.168.1.103 you would create your share like:

//192.168.1.103/drive_k

If you intend to share a folder within a certain drive the share should be stated directly.

The k:\files\videos folder shared as Videos would be mounted as:

//192.168.1.103/Videos

NOTES:

-Only use forward slashes.

-It is best to replicate any capital letters contained in your share name.

-It is best to avoid using special characters like : in the share name.

Do I need to add a user name and password?

It is usually best to spend a couple of minutes and create an account in Windows with a known password for sharing and use that.

Anonymous access through the "Guest" account.

Guest access is implemented differently in XP and Vista (compared to 2000 & Prior) Essentially the Guest account has to be enabled for the 'everyone group' to have any effect.

Depending on your current level of security you may need to add "guest" or grant full control to 'Everyone' under advanced permissions. This is common for Windows Vista. You would then use:

User name: guest

Password: <empty>

Could there be something blocking access?

You may also want to double-check that you don't have it blocked by firewall settings or some sort of firewall software running. Programs like F-Secure usually require a new rule created to allow incoming and outgoing local IP traffic.

I just can't get it to connect

There were some changes from XP to Vista where Vista no longer supports the NTLM protocol by default. The Media Center is currently using smb version 3.0.22 which should have support for the newer NTLM2 protocol of Vista. Some users have reported their Vista is working, yet some other have difficulty so there may be differences in Vista releases.

If you figure the protocol change is suspect you could try forcing Vista to use the NTLM protocol as well as NTLM2.

To do that, use these commands:

Disclaimer: This is just a suggested method of how to use the earlier protocol and not necessarily what you should do.

Click "Start -> Run."

Type in the Run field: "secpol.msc." to bring you to Vista's security policy system.

Select "Go to: Local Policies > Security Options"

Find "Network Security: LAN Manager" authentication level.

Change the Setting from "Send NTLMv2 response only" to "Send LM & NTLM -- use NTLMv2 session security if negotiated."

In Vista Home Premium, you won't have this tool so what can be done is:

Launch your registry editor and open key:

HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Lsa

Change the value of the DWORD named LmCompatibilityLevel to 1

If it isn't present, create it.

And of course reboot.

Software License

The CaptiveWorks Linux Media Center is using open-source software. The operating system and multimedia software licenses vary. The individual licenses can be found with the source code for the individual applications.

Generally they fall under the GPL or its variants.

The Java GUI Is licensed separately from the rest of the system. That license follows:

Copyright (c) 2006 By CaptiveWorks Inc

Redistribution and use of this code or any derivative works are permitted free of charge provided that the following conditions are met:

- This software is distributed in binary form only. The binaries are the property of the copyright holder and may not be reverse engineered.
- Redistributions may not be sold, nor may they be used in a commercial product or activity.
- Redistributions must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Warranty Information

CaptiveWorks Inc warranties the Media Center to be free from defects in the workmanship or materials for a period of 12 months from the date of purchase by the consumer. If at any time during the warranty period the product exhibits a defect in material or workmanship, CaptiveWorks will repair or replace the unit within a reasonable period of time.

CaptiveWorks' liability under this warranty is limited to servicing or adjusting the system returned to CaptiveWorks or it's authorized service centers. The warranty shall be limited to the hardware in the system and does not cover damage or malfunctions caused by misuse, abuse, improper use of third party software, insufficient care or other act beyond the control of CaptiveWorks.

The findings of CaptiveWorks or it's service centers shall be in final in all matters.

Technical Support

Official CaptiveWorks Linux Media Center support site: <http://www.CaptiveWorks.org>

The official support site contains the source code and a technical support forum. Official updates will be found through the Media Center update facility or directly on the official support site.

Email support can be reached at support@captiveworks.org